

Year	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

Tyr 1	Asp	Ile	Ile	Lys 5	Asn	Lys	Arg	Trp	Ser 10	Arg	Met	Thr	Gln	Phe 15	Val
Tyr	Ala	Phe	Asn 20	Glu	Gly	Asn	Ile	Ala 25	Met	Lys	Asp	Leu	Leu 30	Gly	Gly
Lys	Gly	Ala	Asn 35	Leu	Ser	Glu	Met 40	Lys	Arg	Leu	Gly 45	Leu	Pro 50	Val	Pro
Asp 50	Gly	Phe	Thr	Ile	Thr	Thr 55	Glu	Ala	Cys	Ile	Thr 60	Tyr	Leu	Lys	Gln
Asn 65	Glu	Glu	Leu	Pro	Thr 70	Glu	Val	Lys	Thr	Gln 75	Leu	Ile	Asp	His 80	Leu
Ala	Ala	Phe	Ser 85	Lys	Arg	Thr	Gly	Lys 90	Ala	Phe	Ser	Ser	Asp 95	Asn	
Leu	Leu	Leu	Val 100	Ser	Val	Arg	Ser 105	Gly	Ala	Lys	Ile	Ser 110	Met	Pro	Gly
Met	Met	Asp 115	Thr	Ile	Leu	Asn 120	Leu	Gly	Leu	Asn	Asp 125	Asp	Asn	Val	Lys
Lys 130	Leu	Val	Asp	Lys	Thr	Asn 135	Asp	Ala	Arg	Phe	Ala 140	Tyr	Asp	Cys	Tyr
Arg 145	Arg	Leu	Leu	Gln	Met 150	Phe	Gly	Glu	Val	Val 155	Tyr	Gly	Ile	Pro 160	Met
Thr	Ala	Phe	Asp 165	Thr	Tyr	Phe	Asn	Asp 170	Phe	Lys	Thr	Lys	His 175	Arg	Tyr
Gln	Asn	Asp 180	Ala	Glu	Ile	Pro	Ala 185	Glu	Gly	Leu	Gln	Thr 190	Ile	Cys	Glu
Lys	Tyr	Lys 195	Glu	Ile	Tyr	Val	Glu 200	Glu	Ala	Tyr	Lys 205	Pro	Phe	Pro	Gln
Glu	Pro 210	Leu	Lys	Gln	Leu	Glu 215	Glu	Ala	Ile	Glu 220	Ala	Val	Phe	Lys	Ser
Trp 225	Asp	Asn	Asp	Arg 230	Ala	Arg	Val	Tyr	Arg 235	Asp	Leu	Asn	Asp	Ile	Pro
His	Asp	Ile	Gly 245	Thr	Ala	Val	Asn	Ile 250	Gln	Glu	Met	Val 255	Phe	Gly	Asn
Ser	Gly	Glu	Asn 260	Ser	Gly	Thr	Gly 265	Val	Ala	Phe	Thr	Arg 270	Asn	Pro	Val
Thr	Gly 275	Glu	Asn	His	Leu	Phe	Gly 280	Glu	Tyr	Leu	Leu 285	Asn	Ala	Gln	Gly
Glu	Asp 290	Val	Val	Ala	Gly	Ile 295	Arg	Thr	Pro	Lys 300	Asp	Ile	Asp	Thr	Leu
Lys 305	Gln	Gln	Met	Pro 310	Asp	Val	His	Gln	Glu 315	Phe	Val	Asp	Val	Thr	Lys
Gln	Leu	Glu	Lys 325	His	Tyr	Lys	Asp	Met 330	Gln	Asp	Ile	Glu 335	Phe	Thr	Ile
Glu	Asn	Gly	Lys 340	Leu	Tyr	Leu	Leu 345	Gln	Thr	Arg	Asn	Gly 350	Lys	Arg	Thr
Ala	Lys 355	Ala	Ala	Ile	Lys	Ile	Ala 360	Val	Asp	Leu	Val 365	His	Glu	Gln	Leu
Ile	Thr 370	Arg	Glu	Glu	Ala 375	Val	Ser	Lys	Val 380	Glu	Val	Lys	Ser	Ile	Asp

Gln	Leu	Leu	His	Pro	Asn	Phe	Asn	Glu	Glu	Ser	Leu	Lys	Gln	Ala	Thr
385					390					395					400
Val	Val	Ser	Lys	Met	Gly	Leu	Pro	Ala	Ser	Pro	Gly	Ala	Ala	Thr	Gly
				405					410					415	
Lys	Val	Val	Phe	Ser	Ala	Glu	Glu	Ala	Lys	Leu	Gln	Ala	Glu	Asn	Gly
			420					425					430		
Asn	Lys	Val	Val	Leu	Met	Arg	Pro	Glu	Thr	Ser	Pro	Glu	Asp	Ile	Glu
		435					440					445			
Gly	Met	Val	Ala	Ser	Glu	Ala	Ile	Val	Thr	Thr	His	Gly	Gly	Met	Thr
	450					455					460				
Ser	His	Ala	Ala	Val	Val	Ala	Arg	Gly	Met	Gly	Lys	Cys	Cys	Val	Thr
465					470					475					480
Gly	Cys	Ser	Asn	Val	Glu	Ile	Asp	Thr	Val	Asn	Lys	Thr	Val	Tyr	Tyr
			485						490					495	
Pro	Glu	Gly	Glu	Leu	His	Glu	Gly	Asp	Ile	Val	Ser	Val	Asp	Gly	Ser
			500					505					510		
Ala	Gly	Asp	Leu	Tyr	Leu	Gly	Ala	Ile	Glu	Thr	Val	Asn	Ala	Glu	His
		515					520					525			
Ser	Glu	Glu	Phe	Asp	Gln	Phe	Met	Thr	Trp	Ser	Glu	Glu	Ile	Ala	Arg
	530					535					540				
Leu	Gln	Val	Arg	Met	Asn	Ala	Glu	Thr	Pro	Gln	Asp	Ile	Lys	Ala	Gly
545					550					555					560
Tyr	Asn	Phe	Gly	Ser	Lys	Gly	Ile	Gly	Leu	Val	Arg	Thr	Glu	His	Met
			565						570					575	
Phe	Phe	Gly	Pro	Glu	Arg	Leu	Ile	Glu	Met	Arg	Arg	Phe	Ile	Leu	Ala
			580					585					590		
Ser	Asn	His	Asp	Glu	Arg	Val	Gln	Ala	Leu	Glu	Lys	Ile	Lys	Thr	Tyr
		595					600					605			
Gln	Val	Glu	Asp	Phe	Glu	Thr	Ile	Phe	Arg	Leu	Ser	Gln	Asp	Arg	Pro
	610					615					620				
Thr	Ile	Val	Arg	Leu	Leu	Asp	Pro	Pro	Leu	His	Glu	Phe	Leu	Pro	Ser
625					630					635					640
Ser	Glu	Glu	Asp	Ile	Asn	Asn	Val	Ser	Gln	Gln	Leu	Asn	Val	Ser	Ser
			645						650					655	
Glu	Phe	Leu	Arg	Lys	Arg	Ile	Val	Asp	Leu	Asn	Glu	Val	Asn	Pro	Met
			660					665					670		
Leu	Gly	His	Arg	Gly	Cys	Arg	Leu	Ala	Val	Thr	Tyr	Pro	Glu	Leu	Tyr
	675						680					685			
Glu	Met	Gln	Val	Glu	Ala	Ile	Ile	Glu	Ser	Val	Ile	Lys	Leu	Gln	Lys
	690					695					700				
Glu	Gly	Ile	Thr	Cys	Leu	Pro	Glu	Ile	Met	Ile	Pro	Leu	Val	Ser	Thr
705					710					715					720
Val	Glu	Glu	Phe	Thr	Thr	Leu	Lys	Glu	Arg	Leu	Val	Asn	Thr	Ile	Thr
			725						730					735	
His	Leu	Glu	Lys	Glu											

2003

Asn	Pro	Glu	Ile	Lys	Ile	Gly	Val	Cys	Gly	Glu	Leu	Gly	Gly	Asp	Ala
		835					840					845			
Lys	Ser	Ile	Arg	Lys	Phe	Asn	Gln	Trp	Glu	Ile	Asp	Tyr	Val	Ser	Cys
	850					855					860				
Ser	Pro	Phe	Arg	Val	Pro	Gly	Ala	Ile	Leu	Ala	Thr	Ala	Gln	Ser	Gln
865					870					875					880
Ala	Glu	Glu	Ser	Glu	Arg										
				885											

<210> 5023
 <211> 214
 <212> PRT
 <213> S.epidermidis

<400> 5023

Gly	Leu	Ile	Met	Lys	Ala	Phe	Leu	Gln	Glu	Tyr	Gly	Ser	Gln	Leu	Leu
1			5					10					15		
Ser	Lys	Ala	Val	Glu	His	Phe	Tyr	Ile	Ser	Met	Phe	Ala	Leu	Leu	Leu
		20					25					30			
Ala	Ile	Val	Val	Ala	Val	Pro	Leu	Gly	Ile	Leu	Leu	Ser	Lys	Thr	Gln
		35				40					45				
Arg	Thr	Ala	Asn	Val	Val	Leu	Thr	Val	Ala	Gly	Val	Leu	Gln	Thr	Ile
	50				55					60					
Pro	Thr	Leu	Ala	Val	Leu	Ala	Ile	Met	Ile	Pro	Ile	Phe	Gly	Val	Gly
65				70				75						80	
Lys	Thr	Pro	Ala	Ile	Val	Ala	Leu	Phe	Ile	Tyr	Val	Leu	Leu	Pro	Ile
			85					90					95		
Leu	Asn	Asn	Thr	Val	Leu	Gly	Val	Lys	Asn	Ile	Asp	Lys	Asn	Val	Ile
		100						105					110		
Gln	Ala	Gly	Gln	Ser	Met	Gly	Met	Thr	Lys	Phe	Gln	Leu	Met	Lys	Asp
		115				120					125				
Val	Glu	Met	Pro	Leu	Ala	Leu	Pro	Leu	Ile	Ile	Ser	Gly	Ile	Arg	Leu
	130					135					140				
Ser	Ser	Val	Tyr	Val	Ile	Ser	Trp	Ala	Thr	Leu	Ala	Ser	Tyr	Val	Gly
145					150					155				160	
Ala	Gly	Gly	Leu	Gly	Asp	Leu	Val	Phe	Asn	Gly	Leu	Asn	Leu	Tyr	Gln
			165					170					175		
Pro	Pro	Met	Ile	Ile	Ser	Ala	Ala	Ile	Val	Val	Thr	Leu	Leu	Ala	Leu
		180						185					190		
Val	Ile	Asp	Phe	Ile	Leu	Ser	Leu	Val	Glu	Lys	Trp	Val	Val	Pro	Lys
		195					200					205			
Gly	Leu	Lys	Val	Ser	Arg										
	210														

<210> 5024
 <211> 45
 <212> PRT
 <213> S.epidermidis

<400> 5024

His	Glu	Ile	Met	Ser	Gln	Thr	Phe	Phe	Thr	Tyr	Lys	Glu	Gly	Ile	Ser
1			5						10					15	
Lys	Phe	Tyr	Asn	Cys	Leu	Asn	Asn	Val	Lys	Gly	Pro	Ile	Lys	Arg	Asp
		20						25					30		
Tyr	Arg	Lys	Ile	Glu	Gln	Ile	Lys	Pro	Val	Ala	Arg	Arg			
		35					40					45			

<210> 5025
 <211> 962
 <212> PRT
 <213> S.epidermidis

<400> 5025

Lys	Arg	Ile	Met	Ile	Ile	Arg	Ser	Val	Lys	Met	Lys	Asn	Ala	Leu	Lys
1			5						10					15	
Leu	Phe	Ile	Thr	Asp	Leu	Lys	Arg	Val	Ala	Lys	Thr	Pro	Gly	Val	Trp
			20					25					30		
Val	Ile	Leu	Ala	Gly	Leu	Ala	Ile	Leu	Pro	Ser	Phe	Tyr	Ala	Trp	Phe
		35					40					45			
Asn	Leu	Trp	Ala	Met	Trp	Asp	Pro	Tyr	Gly	His	Thr	Gly	His	Ile	Lys
	50					55					60				
Val	Ala	Val	Val	Asn	Glu	Asp	Gln	Gly	Glu	Lys	Val	Arg	Gly	Lys	Asn
65					70					75					80
Ile	Asn	Val	Gly	Asn	Lys	Met	Val	Lys	Thr	Leu	Lys	Lys	Asn	Asp	Ser
				85					90					95	
Phe	Asp	Trp	Gln	Phe	Val	Ser	Arg	Glu	Lys	Ala	Asp	His	Glu	Ile	Lys
			100					105					110		
Met	Gly	Lys	Tyr	Tyr	Ala	Gly	Ile	Tyr	Ile	Pro	Lys	Lys	Phe	Thr	His
		115					120						125		
Glu	Ile	Thr	Gly	Thr	Leu	Arg	Lys	His	Pro	Gln	Lys	Ala	Asp	Ile	Asp
		130				135						140			
Phe	Lys	Val	Asn	Gln	Lys	Ile	Asn	Ala	Val	Ala	Ala	Lys	Leu	Thr	Asp
145					150					155					160
Thr	Gly	Ser	Ser	Phe	Val	Ile	Asp	Lys	Ala	Asn	Lys	Gln	Phe	Asn	Lys
				165					170					175	
Thr	Val	Ala	Thr	Ala	Leu	Leu	Ser	Glu	Ala	Asn	Lys	Val	Gly	Leu	Ser
			180					185					190		
Ile	Glu	Asp	Asn	Val	Pro	Thr	Ile	Asn	Lys	Ile	Lys	Ser	Ala	Val	Tyr
		195					200						205		
Gln	Ala	Asn	Asn	Ser	Leu	Pro	Lys	Ile	Asn	Gln	Phe	Ala	Asp	Lys	Ile
	210					215						220			
Ile	Glu	Leu	Asn	Lys	His	Gln	Asp	Asp	Leu	Asp	Ala	Tyr	Ala	Asn	Gln
225					230					235					240
Phe	Arg	Ser	Leu	Gly	Lys	Tyr	Lys	Gly	Asn	Val	Leu	Asp	Ala	Gln	Glu
				245					250					255	
Lys	Leu	Asn	Ala	Val	Asn	Ser	Ser	Ile	Pro	Ala	Leu	Asn	Glu	Arg	Ala
		260						265					270		
Lys	Leu	Ile	Leu	Ala	Leu	Asp	Ser	Tyr	Met	Pro	Asn	Ile	Glu	Arg	Ile
		275					280						285		
Leu	Asn	Val	Ala	Ala	Asn	Asp	Val	Pro	Ala	Gln	Phe	Pro	Arg	Ile	Asn
	290					295					300				
Arg	Gly	Val	Asp	Ile	Ala	Ser	Glu	Gly	Ile	Asp	Ala	Ala	Ser	Gly	Gln
305					310					315					320
Leu	Asn	Asp	Ala	Lys	Gly	Tyr	Leu	Thr	Gln	Ala	Lys	Ala	Arg	Val	Gly
				325					330					335	
Asp	Tyr	Gln	Glu	Ala	Ala	Gly	Arg	Ala	Gln	Asp	Val	Asn	Asn	Gln	Ala
		340						345					350		
Asn	Gln	Asn	Leu	Arg	Asn	Gln	Thr	Ser	Thr	Thr	Pro	Gln	Ser	Ala	Ile
		355					360						365		
Lys	Ser	Ser	His	Ser	Glu	Gly	Lys	Ser	His	Ser	Ser	Ile	Lys	Thr	Val
	370					375						380			
Pro	Val	Ser	Gln	Ser	Gly	Glu	Asn	Gln	Pro	Val	Tyr	Gly	Asp	Asn	Ile

385		390		395		400
Leu Ser Asn Ser Asp Val Lys Ser Met Asn Thr Ala Leu Thr Glu Ala						
		405		410		415
Leu Leu Ser Leu Ser Asn Gln Thr Asp Gln Gln Ala Gln Ala Thr Gln						
		420		425		430
Gln Asp Ile Lys Ser Leu Lys Asn Ile Ala Tyr Gly Val Ile Ala Ser						
		435		440		445
Asp Lys Pro Ser Glu Phe Lys Glu Pro Leu Lys Asn Ile Lys Ser Arg						
		450		455		460
Leu Glu Asn Ala Ser Lys Tyr Asn Gln Gln Phe Ile Asp Ile Leu Ser						
465		470		475		480
Glu Leu Glu Lys Ser Glu His Val Asp Leu Ser Asn Glu Ile Lys Gln						
		485		490		495
Val Lys Glu Ala Asn Asn Ser Ile Asn Asp Asn Leu Lys Ser Thr Asn						
		500		505		510
Gln Leu Ile Asp Ala Leu Ser Asn Gly Ser Ser Gly Gln Leu Glu Ala						
		515		520		525
Val Asn Val Leu Arg Asp Leu Pro Asn Leu Asn Lys Arg Leu Asp Thr						
		530		535		540
Leu Arg Asn Tyr Ile Lys Lys Glu Leu Asn Arg Asn Leu Leu Ala Val						
545		550		555		560
Ser Asn Glu Ile Thr Asp Gln Leu Asn Lys Gly Gln Asn Thr Leu Ser						
		565		570		575
Thr Ile Gln Ser Lys Leu Asn Thr Ile Asn Arg Val Ile Asn Ala Gly						
		580		585		590
Gln Asp Ile Leu Asn Ser Gly Lys Lys Arg Ile Asp Thr Ile Gln Thr						
		595		600		605
Ala Leu Pro Ala Ile Glu Asn Ala Tyr Ile Asn Ala Met Arg Thr Ala						
		610		615		620
Gln Ala Tyr Phe Pro Thr Ala Lys Lys Asp Val Ala Lys Ala Ala Asp						
625		630		635		640
Phe Val Arg Asn Asp Leu Pro Gly Leu Glu Arg Glu Leu Ala Asn Val						
		645		650		655
Thr Gln Ser Val Asn Gln Lys Ile Pro Ser Leu Phe Ser Arg Tyr Asp						
		660		665		670
Asn Ala Val Asp Leu Leu Asn Glu Lys Gln Pro Gln Ala Lys Glu Ala						
		675		680		685
Leu Ala Ser Leu Ala Asp Phe Ser Glu Asn Lys Leu Pro Asp Val Glu						
		690		695		700
Lys Asp Leu Lys Lys Ala Asn Lys Ile Phe Lys Lys Leu Asp Lys Asp						
705		710		715		720
Asp Ala Val Asp Lys Leu Ile Asp Thr Leu Lys Asn Asp Leu Lys Lys						
		725		730		735
Gln Ala Asp Ile Val Ala Asn Pro Ile Asn Lys Lys Thr Thr Asp Val						
		740		745		750
Phe Pro Val Lys Asp Tyr Gly Ser Gly Met Thr Pro Phe Tyr Thr Ala						
		755		760		765
Leu Ser Ile Trp Val Gly Gly Leu Leu Met Val Ser Leu Leu Ser Val						
		770		775		780
Asp Asn Lys His Glu His Leu Gln Pro Ile Met Thr Lys Arg Gln Val						
785		790		795		800
Tyr Leu Gly Lys Ser Gly Phe Phe Phe Leu Leu Gly Ile Ile Gln Ala						
		805		810		815
Leu Ile Val Ser Ile Gly Asp Leu Val Ile Leu Lys Ala Ser Ile Glu						
		820		825		830
Ser Pro Ile Leu Phe Val Ser Ile Ala Val Phe Ser Ser Leu Val Phe						

```
<210> 5026
<211> 77
<212> PRT
<213> S.epidermidis
```

```
<210> 5027
<211> 45
<212> PRT
<213> S.epidermidis
```

```
<210> 5028
<211> 252
<212> PRT
<213> S.epidermidis
```

<400> 5028
Leu Phe Val Ile Met Ile Ile Gln Lys Gly Gly Ile Ile Met Ile Gly
1 5 10 15

```
<210> 5029
<211> 522
<212> PRT
<213> S.epidermidis
```

<400> 5029															
Arg	Arg	Ser	Ile	Gly	Leu	Lys	Ile	Lys	Ala	Gln	Val	Ala	Met	Val	Leu
1				5					10					15	
Asn	Leu	Asp	Lys	Cys	Ile	Gly	Cys	His	Thr	Cys	Ser	Val	Thr	Cys	Lys
			20					25					30		
Asn	Thr	Trp	Thr	Asn	Arg	Pro	Gly	Ala	Glu	Tyr	Met	Trp	Phe	Asn	Asn
			35				40					45			
Val	Glu	Thr	Lys	Pro	Gly	Val	Gly	Tyr	Pro	Lys	Arg	Trp	Glu	Asp	Gln
	50					55					60				
Gly	Gln	Tyr	Lys	Gly	Gly	Trp	Val	Leu	Asn	Lys	Lys	Gly	Lys	Leu	Glu
65					70					75					80
Leu	Lys	Ser	Gly	Asn	Arg	Trp	Ser	Lys	Ile	Ala	Leu	Gly	Lys	Ile	Phe
				85					90					95	
Tyr	Asn	Pro	Asp	Met	Pro	Leu	Ile	Gln	Asp	Tyr	Tyr	Glu	Pro	Trp	Thr
			100					105					110		
Tyr	Asn	Tyr	Glu	His	Leu	Thr	Asn	Ala	Lys	Gln	Gly	Gln	His	Ser	Pro
			115				120					125			
Val	Ala	Thr	Ala	His	Ser	Leu	Ile	Ser	Gly	Asp	Arg	Leu	Asn	Leu	Lys
	130					135					140				
Trp	Gly	Pro	Asn	Trp	Glu	Asp	Asp	Leu	Ala	Gly	Gly	His	Ile	Thr	Gly

Val Ser Ala Lys Thr Phe Thr Ile Met Ser Glu Ala Ala Ala Glu Asp
 20 25 30
 Lys Ile Arg Pro Thr Thr Ile Ile Pro Lys Cys Gly Ala Met Ala Ile
 35 40 45
 Ile Pro Phe Pro Lys Ile Lys Thr Ile Asn Val His Asn Asn Thr Asp
 50 55 60
 Arg Glu Glu Asn Arg
 65

<210> 5031

<211> 66

<212> PRT

<213> S.epidermidis

<400> 5031

Thr Ser Ala Met Ala Cys Val Phe Leu Ala Gly Gly Ala Thr Val Ala
 1 5 10 15
 Ala Thr Leu Ile His Thr Pro Lys Asn Gly Ala Cys Ile Ala Ala Asp
 20 25 30
 Met Ser Leu Asp Asn Asn Asn Thr Leu Lys Phe Gly Ala Asn Ile Pro
 35 40 45
 Thr Lys Leu Leu Ile Ile Lys Ile Ala Thr Lys Ile Gly Asn Arg Arg
 50 55 60
 Trp Ala
 65

<210> 5032

<211> 76

<212> PRT

<213> S.epidermidis

<400> 5032

Thr Arg Gln Ile Val Arg Phe Ile Ser Phe Val Glu Thr Ser Ile Ile
 1 5 10 15
 Val Leu Val His Ser Ile Thr Leu Arg Leu Ile Phe Lys Ile Leu Ala
 20 25 30
 Leu Asn Ile Ile Thr Ile Thr Ser Ser Ile Ala Leu Thr Cys His Leu
 35 40 45
 Phe Thr Leu Ile Leu Tyr Phe Asn Lys Leu Asn Arg Tyr Thr Phe Ile
 50 55 60
 Arg Ala Ser Ser Tyr Lys Leu Cys Arg Gln Ala Ile
 65 70 75

<210> 5033

<211> 46

<212> PRT

<213> S.epidermidis

<400> 5033

Arg Ile Lys Ile Leu Lys Thr Tyr Arg Ser Leu Leu Met Ala Met Ser
 1 5 10 15
 Leu Phe Ile Ile Val Asn Tyr Lys Glu Met Lys Lys Ile Ile Ile Phe
 20 25 30
 Ile Asn Ser Lys Tyr Asn Phe Val Glu Glu Lys Phe Lys Asn
 35 40 45

<210> 5034
 <211> 44
 <212> PRT
 <213> S.epidermidis

<400> 5034
 Tyr Pro Lys Met Val Leu Ile Thr Asn Pro Val Met Thr Asp Thr Val
 1 5 10 15
 Ile Thr Lys Asn Pro Gly Ile Ile Lys Leu Val Gly Leu Val Leu Pro
 20 25 30
 Val Ser Ser Ser Thr Ala Asn Asn Ser Val Gly
 35 40

<210> 5035
 <211> 61
 <212> PRT
 <213> S.epidermidis

<400> 5035
 Asn His Lys Ile Phe Phe Glu Met Ile Gly Arg Gln Val Ala Ile Lys
 1 5 10 15
 Met Met Lys Lys Arg Cys Ala Thr Asn His His Ala Asn Ser Phe Gln
 20 25 30
 Leu Lys Glu Lys Asn Gly Arg Cys Ala Arg Lys Thr Arg Ser Gly Tyr
 35 40 45
 Ile Lys Val Asn Ile Asn Thr Lys Gly Lys Tyr Ala Arg
 50 55 60

<210> 5036
 <211> 82
 <212> PRT
 <213> S.epidermidis

<400> 5036
 Thr Cys Lys Ile Ile Tyr Asn Arg Tyr His Asn Tyr Trp Gly Leu Glu
 1 5 10 15
 Thr Leu Arg Glu Gly Glu Thr Met Ile Phe Val Met Leu Ser Pro Ile
 20 25 30
 Leu Ile Ile Leu Phe Ile Val Leu Ser Val Leu Glu Glu Lys Arg Arg
 35 40 45
 Lys Lys Asn Ser Lys Glu Gln Asn Ser Asn His Val Asp Gln Gln Gln
 50 55 60
 Tyr Asp Tyr Thr Asp Lys Glu Gln Gln Gln Asn Lys Asn Ser Asn Asp
 65 70 75 80
 Asp Lys

<210> 5037
 <211> 46
 <212> PRT
 <213> S.epidermidis

<400> 5037
 Lys Leu Lys Ile Leu Glu Val Glu Trp Asn Arg Arg Asn Lys Lys Ala
 1 5 10 15
 Leu Thr Asn Val Lys Phe Leu Ile Pro His Ala Asn Glu Ile Gly Met

2011

		20						25				30			
Ala	Gln	Arg	Thr	Ile	Gly	Glu	Arg	Arg	His	Leu	Leu	Tyr	Glu		
		35					40					45			

<210> 5038

<211> 402

<212> PRT

<213> S.epidermidis

<400> 5038

Gly	Glu	Lys	Met	Phe	Lys	Lys	Phe	Glu	Tyr	Lys	Ile	Leu	Tyr	Lys	Arg
1			5					10						15	
Ile	Phe	Phe	Thr	Cys	Leu	Ile	Leu	Val	Ile	Tyr	Ile	Ile	Gly	Ser	Asn
			20					25					30		
Ile	Ser	Ile	Val	Ser	Asn	Glu	Asn	Leu	Arg	Thr	His	Lys	Asp	Ser	Phe
			35				40					45			
Phe	Lys	Leu	Ala	Ile	Thr	Asn	Val	Gly	Gly	Asp	Leu	His	Thr	Leu	Asn
	50					55				60					
Ile	Phe	Ser	Leu	Gly	Leu	Gly	Pro	Trp	Leu	Ser	Ser	Met	Ile	Ile	Leu
65				70					75					80	
Thr	Leu	Ile	Asn	His	Lys	Ser	Asn	Asp	Lys	Val	Lys	Thr	Gln	Thr	Arg
			85					90					95		
Arg	Glu	Arg	His	Phe	Lys	Glu	Arg	Ala	Leu	Thr	Leu	Ile	Ile	Ser	Ala
			100					105					110		
Ala	Gln	Gly	Phe	Tyr	Ile	Ile	His	Ser	Tyr	Ile	Asn	Lys	His	Ala	Ile
		115					120					125			
Lys	Asp	Ser	Asn	Met	Leu	Ile	Leu	Leu	Val	Leu	Ile	Thr	Gly	Thr	
	130					135				140					
Leu	Leu	Met	Val	Trp	Leu	Ala	Asp	Gln	Asn	Thr	Thr	Tyr	Gly	Ile	Ser
145				150					155					160	
Gly	Pro	Met	Pro	Ile	Val	Leu	Met	Ser	Leu	Val	Lys	Ser	Ile	Phe	Asn
			165					170					175		
Thr	Pro	Phe	Pro	Lys	Leu	Asn	Ser	Ser	Ala	Ser	Leu	Ile	Thr	Met	Ile
			180					185					190		
Ile	Val	Leu	Leu	Val	Leu	Asp	Leu	Phe	Ile	Leu	Phe	Phe	Ile	Glu	Leu
		195				200						205			
Thr	Glu	Tyr	Arg	Ile	Glu	Tyr	Asn	Asp	Ile	Met	Asn	Ile	Ser	Ala	Lys
	210					215					220				
Asp	Ile	Pro	Ser	Tyr	Leu	Ser	Trp	Lys	Leu	Asn	Pro	Ala	Gly	Ser	Ile
225					230					235				240	
Ser	Ile	Met	Val	Ser	Leu	Ser	Leu	Phe	Met	Leu	Thr	Asn	Asn	Ile	Val
			245					250					255		
Asn	Phe	Ile	Gly	Arg	Phe	Ile	Val	Asn	His	Asn	Phe	Glu	Thr	His	Val
		260					265					270			
Phe	Asn	Phe	Thr	Asn	Pro	Val	Gly	Ile	Thr	Ile	Tyr	Leu	Leu	Leu	Gln
		275					280					285			
Met	Ile	Leu	Gly	Tyr	Phe	Leu	Ser	Arg	Leu	Leu	Ile	Asn	Thr	Lys	Arg
	290					295					300				
Lys	Ser	Lys	Glu	Phe	Leu	Lys	Asn	Gly	Asn	Tyr	Phe	Glu	Gly	Ile	Gln
305				310					315					320	
Pro	Gly	Gln	Gln	Thr	Glu	Lys	Phe	Leu	Gly	Ser	Lys	Ala	Arg	Arg	Ile
			325						330				335		
Cys	Trp	Phe	Gly	Ser	Ile	Val	Val	Ala	Ile	Val	Leu	Ala	Ile	Pro	Met
		340					345					350			
Tyr	Ser	Ala	Leu	Leu	Val	Pro	His	Leu	Leu	Lys	Glu	Val	Tyr	Phe	Thr
		355				360						365			

Submitted by: S. epidermidis

2012

Thr Gln Met Ile Val Phe Val Tyr Ile Gly Ile Asn Ile Ala Glu Thr
 370 375 380
 Ile Arg Ala Tyr Leu Tyr Phe Asp Ser Tyr Lys Gln Ile Leu Asn Lys
 385 390 395 400
 Tyr Trp

<210> 5039
 <211> 371
 <212> PRT
 <213> S.epidermidis

<400> 5039
 Ile Val Glu Ile Ala Phe Phe Arg Val Tyr Asp Asn Tyr Gly Leu Lys
 1 5 10 15
 Ile Lys Lys Glu Gly Phe Gly Glu Met Asp Ile Ile Leu Gly Val Gly
 20 25 30
 Thr Leu Val Leu Val Leu Ile Ile Met Thr Leu Phe Leu Asn Phe Ala
 35 40 45
 Pro Tyr Gly Lys Gln Gly Leu Gln Ala Leu Ser Gly Ala Ala Cys Ala
 50 55 60
 Thr Phe Leu Pro Gln Ala Phe Leu Ser Tyr Ala Ile Gly Gly Val Phe
 65 70 75 80
 His Val Lys Phe Phe Gln Glu Ile Gly Asp Leu Ala Gly Ser Leu Ser
 85 90 95
 Gly Ile Ala Val Gly Ile Leu Thr Cys Leu Lys Leu Glu Val Ser Pro
 100 105 110
 Val Phe Ala Val Ile Val Gly Leu Val Leu His Asp Ser Lys Leu Leu
 115 120 125
 Pro Ala Phe Ile Ala Ala Tyr Val Val Ala Phe Gly Ile Lys Phe Val
 130 135 140
 Glu Lys Lys Val Pro Glu Gly Leu Asp Leu Ile Val Val Ile Leu Leu
 145 150 155 160
 Ala Pro Ala Val Thr Phe Gly Leu Ala Asn Leu Ile Ser Pro Gly Val
 165 170 175
 Ile Ala Val Leu Lys Gln Ile Gly Ser Ala Ile Thr Ser Val Gly Asp
 180 185 190
 Asn Asn Pro Tyr Ala Leu Ala Val Ile Leu Gly Leu Val Ile Pro Val
 195 200 205
 Thr Gly Met Thr Pro Leu Ser Ser Met Val Leu Thr Ser Leu Leu Gly
 210 215 220
 Leu Thr Gly Ile Pro Met Ala Ile Gly Ala Leu Thr Cys Thr Gly Ala
 225 230 235 240
 Ser Phe Val Asn Gly Ile Leu Phe Ser Lys Leu Lys Ile Gly Asn Lys
 245 250 255
 Gly Asn Ala Phe Ala Val Phe Val Glu Pro Leu Thr Gln Ile Asp Leu
 260 265 270
 Ile Ala Lys Tyr Pro Leu Gln Leu Phe Gly Ala Asn Ala Ile Ile Gly
 275 280 285
 Val Val Asn Ala Cys Ile Val Thr Tyr Ser Gly Leu Ile Ile Asp Ile
 290 295 300
 Lys Gly Met Ala Thr Pro Ile Ala Gly Ala Ile Val Leu Tyr Gly Phe
 305 310 315 320
 Asn Asp Ala Val Arg Ser Thr Ile Thr Ile Ile Ala Val Ala Ile Ala
 325 330 335
 Ser Val Ile Leu Ala Tyr Val Ile Ser Ala Ile Ile Asn Lys Phe Asn

bioRxiv preprint doi: <https://doi.org/10.1101/000000>; this version posted January 1, 2012. The copyright holder for this preprint (which was not certified by peer review) is the author/funder, who has granted bioRxiv a license to display the preprint in perpetuity. It is made available under aCC-BY-NC-ND 4.0 International license.


```
<210> 5040
<211> 178
<212> PRT
<213> S.epidermidis
```

```
<210> 5041
<211> 152
<212> PRT
<213> S.epidermidis
```

<400> 5041																
Asn	Lys	Met	Ile	Gly	Ser	Glu	Leu	Tyr	Phe	Ser	Leu	Phe	Val	Gly	Val	
1				5					10					15		
Val	Leu	Ser	Leu	Ile	Phe	Ala	Glu	Lys	Phe	Gly	Ile	Asn	Pro	Ala	Gly	
			20					25					30			
Leu	Val	Val	Pro	Gly	Tyr	Leu	Ala	Leu	Ile	Phe	Asp	Gln	Pro	Ile	Met	
		35					40					45				
Leu	Leu	Ser	Val	Leu	Ile	Ile	Ser	Cys	Leu	Thr	Tyr	Phe	Ile	Val	Ser	
	50					55					60					
Asn	Gly	Ile	Ser	Lys	Trp	Val	Ile	Leu	Tyr	Gly	Arg	Arg	Lys	Phe	Ala	
65					70					75				80		
Ala	Met	Ile	Leu	Thr	Gly	Met	Val	Ile	Lys	Phe	Ile	Phe	Asp	Leu	Leu	
				85					90					95		
Tyr	Pro	Leu	Thr	Pro	Phe	Glu	Met	Val	Glu	Val	Ser	Gly	Ile	Gly	Val	

2014

			100					105				110			
Val	Ile	Pro	Gly	Ile	Ile	Ala	Asn	Thr	Ile	Gln	Lys	Gln	Gly	Val	Val
		115					120					125			
Ile	Thr	Leu	Ser	Thr	Thr	Met	Leu	Leu	Thr	Cys	Ile	Thr	Tyr	Ile	Ile
	130					135					140				
Leu	Phe	Leu	Tyr	Ser	Phe	Ile	Asn								
145					150										

<210> 5042

<211> 625

<212> PRT

<213> S.epidermidis

<400> 5042

Leu	Ile	Val	Ile	Asp	Arg	Gln	Ile	Lys	Leu	Ile	Lys	Leu	Leu	Leu	Asn
1				5				10						15	
Tyr	Thr	Asp	Thr	Tyr	Ile	Ser	Gly	His	Asp	Ile	Ala	Lys	Gln	Leu	Asn
			20				25						30		
Val	Ser	Asn	Arg	Thr	Ile	Arg	Asn	Asp	Ile	Lys	Thr	Ile	His	Thr	Thr
		35					40					45			
Phe	Leu	Asn	Glu	Leu	Ile	Leu	Ser	Val	Gln	Ser	Lys	Gly	Tyr	Met	Leu
	50					55					60				
Asn	Thr	Cys	Leu	Tyr	Thr	Pro	Asp	Glu	Ile	Gln	Ser	Ala	Leu	Glu	Ser
65					70					75				80	
Val	Ile	Val	Lys	Glu	Asn	Lys	Leu	Leu	Ile	Thr	Ile	Ala	Tyr	Arg	Leu
				85					90					95	
Phe	Met	Glu	Lys	His	Thr	Phe	Thr	Ile	Lys	Glu	Leu	Ser	Ser	Thr	Tyr
			100					105					110		
His	Leu	Thr	Lys	Ser	Lys	Val	Ile	Asp	Tyr	Val	Thr	Arg	Ile	Gln	Thr
		115					120						125		
Trp	Ala	Ile	Lys	Phe	Asp	Ile	Tyr	Leu	Ser	Ile	Lys	Lys	Lys	Gln	Gly
	130					135						140			
Ile	Met	Ile	Asp	Ala	Ser	Thr	Thr	Ser	Ile	Ser	Asn	Ala	Val	Leu	His
145					150					155				160	
Ile	Asn	Gln	Leu	Thr	Asp	Asp	Asp	Phe	Lys	Val	Glu	Asn	Leu	Ile	Leu
				165					170					175	
Gln	Glu	Leu	Pro	Gln	Ala	His	Thr	Arg	Lys	Ile	Lys	Gln	Ile	Ile	Ser
			180					185					190		
Lys	His	Ile	Asp	Asn	His	Gln	Leu	Ser	Thr	Ser	Glu	Asn	Lys	Ile	Gln
		195					200					205			
Gln	Leu	Leu	Val	His	Leu	Ile	Leu	Ile	Ile	Lys	His	Ser	Gln	Pro	Glu
	210					215						220			
Glu	Glu	Asp	Trp	Ser	Thr	Asp	Thr	Glu	Ser	Leu	Thr	Ile	Ala	Lys	Lys
225					230					235				240	
Cys	Ile	Lys	Asp	Ile	Asn	Glu	Thr	Leu	Gly	Tyr	Gln	Leu	Asn	Asn	Lys
				245					250					255	
Thr	Ser	Glu	Cys	Phe	Ser	Phe	Phe	Ile	Ser	Tyr	His	Phe	Asn	Lys	Phe
			260					265					270		
Asp	Leu	Gly	Ile	Gln	Gln	Leu	Phe	Ile	Gln	Ser	Tyr	Ile	Asp	Arg	Leu
		275					280						285		
Ile	Glu	Leu	Met	Glu	Gln	His	Ile	Gly	Phe	Pro	Phe	Ser	Gln	Asp	Thr
	290					295						300			
Ile	Leu	Lys	Asp	Asn	Met	Asn	Val	His	Phe	Ser	Arg	Thr	Tyr	Leu	Arg
305					310					315				320	
Leu	Met	Ser	His	Val	Tyr	Leu	Asn	Asn	Pro	Leu	Thr	Ser	Gln	Ile	Lys
				325					330					335	

bioRxiv preprint doi: <https://doi.org/10.1101/000000>; this version posted January 1, 2014. The copyright holder for this preprint (which was not certified by peer review) is the author/funder, who has granted bioRxiv a license to display the preprint in perpetuity. It is made available under aCC-BY-NC-ND 4.0 International license.

Arg Leu Tyr Pro Phe Val Phe Asn Thr Leu Tyr Asp Ser Ile Arg Gln
 340 345 350
 Leu Ser Gln Asp Thr Asn Ile Gln Leu Ser Glu Asp Glu Ile Ala Phe
 355 360 365
 Leu Thr Ile His Phe Gln Ser Ser Ile Glu Arg His Lys Ser Ser His
 370 375 380
 Ile His Val Val Ile Ala Cys Tyr Tyr Gly Leu Gly Ile Ser Thr Leu
 385 390 395 400
 Leu Ala Glu Lys Ile Lys Gln Leu Asn His Ala Ile Gln Ile Val Asp
 405 410 415
 Thr Leu Lys Leu Glu Asp Ile Asn Asn Tyr His Phe Glu Gly Ile Asp
 420 425 430
 Leu Leu Ile Thr Thr His Asp Phe Asp Thr Ser Gln Leu Leu Gln Ile
 435 440 445
 Pro Lys Val Ile Gln Val Ser Pro Leu Phe Ser Asp Glu Asp Ala Lys
 450 455 460
 Lys Ile Glu Phe Phe Val Lys Asp Met Gln Asn Pro Leu Ser Lys Asp
 465 470 475 480
 Asp Ile Leu Ser Lys Ile Gln Leu Ser Val Glu Ser Asn Phe Lys Met
 485 490 495
 Asn His Ser Asn His Ile Leu Pro Ile Phe Glu Lys Ser Lys Glu Ile
 500 505 510
 Leu Asp Tyr His His Ala Thr Leu Asp Gly Tyr Ile Glu Ser Ala Ile
 515 520 525
 Asp Arg Glu Lys Gln Ser Ser Thr Tyr Ile Gly Lys Gly Ile Ala Leu
 530 535 540
 Pro His Gly Asn Pro Glu Lys Val Leu Lys Ser His Met Ile Ile Phe
 545 550 555 560
 Lys Pro Ser Gln Pro Ile Thr Trp Lys Gln His Glu Val Lys Leu Val
 565 570 575
 Phe Phe Leu Ala Met Ser Lys Lys Asp Leu Asn Ile Asn Arg Lys Ile
 580 585 590
 Ile Gln Thr Ile Ala Gln Leu Glu Glu Asp Asp Ile His Gln Leu Cys
 595 600 605
 Leu Leu Asp Asp Leu Gln Leu Lys Asn Thr Leu Tyr Ala Arg Phe Lys
 610 615 620
 Glu
 625

<210> 5043

<211> 73

<212> PRT

<213> S.epidermidis

<400> 5043

Lys Gly Val Ile Ile Met Thr Gln Lys Ile Ile Lys Val Glu Gly Met
 1 5 10 15
 Ser Cys Glu His Cys Arg Asn Ala Val Glu Ser Ala Leu Ala Lys Leu
 20 25 30
 Asn Gly Val Ser Ser Ala Glu Val Asn Leu Asp Glu Asn His Val Arg
 35 40 45
 Val Glu Tyr Asn Asp Ser Lys Val Thr Phe Glu Asn Met Lys Glu Ala
 50 55 60
 Ile Glu Glu Gln Gly Tyr Asp Val Lys
 65 70

<210> 5044
 <211> 121
 <212> PRT
 <213> S.epidermidis

<400> 5044
 Ile Glu Val Ile Asn Cys Met Glu Asn Phe Asp Lys Ser Tyr His Asp
 1 5 10 15
 Lys Thr Gly Asp Val Leu Gly Ala Leu Ser Tyr Leu Ser Val Phe Phe
 20 25 30
 Ala Pro Val Leu Phe Pro Leu Ile Val Trp Ile Val Gly Gln Pro Pro
 35 40 45
 Ala Ser Thr Tyr Ser Arg Asn Ala Leu Phe Asn His Ile Leu Ser Trp
 50 55 60
 Val Cys Leu Val Leu Gly Leu Ile Ser Phe Ala Ala Gly Leu Ser Leu
 65 70 75 80
 Ile Asp Ser Thr Asn Gly Val Ala Val Leu Val Ile Gly Val Ile Ile
 85 90 95
 Gly Gly Ile Leu Leu Ile Ala Ser Leu Val Leu Phe Ile Ile Asn Ile
 100 105 110
 Val Lys Gly Ile Lys Leu Leu Met Ile
 115 120

<210> 5045
 <211> 192
 <212> PRT
 <213> S.epidermidis

<400> 5045
 Met Ile Ala Ile Ile Asp Tyr Gly Leu Gly Asn Ile Ser Asn Val Thr
 1 5 10 15
 Arg Ala Ile Gln His Leu Gly Tyr Asp Val Ile Leu Thr Cys Asp Asp
 20 25 30
 Lys Asp Val Gln Lys Ala Glu Ala Ile Val Leu Pro Gly Val Gly His
 35 40 45
 Phe Gln Asp Ala Met His Ser Ile Glu Glu Lys Ser Ile Lys Asp Met
 50 55 60
 Leu Lys Asn Ile His Asp Lys Pro Ile Ile Gly Ile Cys Leu Gly Met
 65 70 75 80
 Gln Leu Leu Phe Gln His Ser Ala Glu Gly Asp Val Ser Gly Leu Glu
 85 90 95
 Leu Val Pro Gly Asn Ile Val Pro Ile Gln Ser Ser His Pro Ile Pro
 100 105 110
 His Leu Gly Trp Asn Glu Leu Lys Ser Thr His Pro Leu Leu Gln Ser
 115 120 125
 Asp Val Tyr Phe Val His Ser Tyr Gln Ala Glu Met Ser Glu Tyr Val
 130 135 140
 Val Ala Tyr Ala Asp Tyr Gly Thr Lys Ile Pro Gly Val Ile Gln Tyr
 145 150 155 160
 Arg Asn Tyr Ile Gly Ile Gln Phe His Pro Glu Lys Ser Gly Thr Tyr
 165 170 175
 Gly Leu Glu Ile Leu Asn Gln Ala Leu Lys Gly Gly Phe Ile Asn Asp
 180 185 190

<210> 5046
 <211> 167

<212> PRT

<213> S.epidermidis

<400> 5046

```

Gly Ile Glu Met Ile Arg Phe Ala Arg Leu Glu Asp Leu Gln Gly Ile
1           5           10           15
Leu Thr Ile Tyr Asn Asp Ala Ile Leu Asn Thr Thr Ala Val Tyr Thr
           20           25           30
Tyr Lys Pro Gln Gln Leu Asp Glu Arg Leu Gln Trp Tyr Gln Ser Lys
           35           40           45
Ala Lys Ile Asn Glu Pro Ile Trp Val Tyr Glu Lys Glu Gly Lys Val
           50           55           60
Val Gly Phe Ala Thr Tyr Gly Ser Phe Arg Gln Trp Pro Ala Tyr Leu
65           70           75           80
Tyr Thr Ile Glu His Ser Ile Tyr Val His Gln Gln Tyr Arg Gly Leu
           85           90           95
Gly Ile Ala Ser Gln Leu Leu Glu Asn Leu Ile Arg Tyr Ala Lys Glu
           100          105          110
Gln Gly Tyr Arg Thr Ile Val Ala Gly Ile Asp Ala Ser Asn Met Asp
           115          120          125
Ser Ile Ala Leu His Lys Lys Phe Asp Phe Ser His Ala Gly Thr Ile
           130          135          140
Lys Asn Val Gly Tyr Lys Phe Asp Arg Trp Leu Asp Leu Ser Phe Tyr
145          150          155          160
Gln Tyr Asp Leu Ser Asp Ser
           165

```

<210> 5047

<211> 134

<212> PRT

<213> S.epidermidis

<400> 5047

```

Leu Leu Glu Met Thr Ile Leu Ile Arg Thr Phe Met Asn Ser Lys Ile
1           5           10           15
His Arg Ala Arg Val Thr Glu Ser Asn Leu Asn Tyr Val Gly Ser Ile
           20           25           30
Thr Ile Asp Ala Asn Ile Leu Asp Ala Val Asp Ile Leu Pro Asn Glu
           35           40           45
Lys Val Ala Ile Val Asn Asn Asn Asn Gly Ala Arg Phe Glu Thr Tyr
           50           55           60
Val Ile Ala Gly Glu Arg Gly Ser Gly Lys Met Cys Leu Asn Gly Ala
65           70           75           80
Ala Ser Arg Leu Val Glu Val Gly Asp Val Ile Ile Ile Met Thr Tyr
           85           90           95
Ala Gln Leu Asn Glu Asp Glu Met Val Asp His Ser Pro Lys Val Ala
           100          105          110
Val Leu Asn Glu Asn Asn Glu Ile Ile Glu Met Ile Asn Glu Lys Glu
115          120          125
Asn Thr Ile Ser Asn Val
           130

```

<210> 5048

<211> 530

<212> PRT

<213> S.epidermidis

<400> 5048

```

Met Asn Trp Ile Ser Ile Ile Leu Phe Ile Met Val Val Gly Gly Ile
1      5      10      15
Ser Phe Tyr Ala Tyr Leu Gln Ser Arg Lys Ile Lys Thr Ser Ser Ser
20      25      30
Asp Gly Tyr Phe Met Gly Gly Asn Ser Leu Thr Gly Phe Thr Val Ala
35      40      45
Ser Thr Ile Ile Met Thr Asn Leu Ser Thr Glu Gln Ile Val Gly Gln
50      55      60
Asn Gly Gln Ser Tyr Ala Gln Gly Met Glu Val Met Ala Trp Glu Val
65      70      75      80
Thr Ala Ala Val Ala Val Val Leu Leu Ala Trp Val Phe Leu Pro Lys
85      90      95
Tyr Leu Lys Tyr Gly Val Asn Thr Ile Ser Glu Phe Leu Glu Leu Arg
100     105     110
Tyr Asp Thr Phe Thr Lys Arg Phe Val Ser Ile Leu Phe Ile Phe Thr
115     120     125
Tyr Val Val Ser Phe Leu Pro Val Val Leu Tyr Ser Gly Ser Leu Val
130     135     140
Phe Asn Lys Met Phe Lys Val Asp Glu Tyr Leu Gly Val Ser Ser Ser
145     150     155     160
Thr Ala Val Ile Ile Ile Ser Ser Ile Ile Gly Ile Ile Gly Ile Ile
165     170     175
Tyr Leu Phe Ile Gly Gly Leu Ser Leu Ser Ala Phe Ser Asp Ser Ile
180     185     190
Tyr Gly Met Ala Leu Ile Ile Gly Gly Leu Ala Ile Thr Ile Leu Gly
195     200     205
Leu Gly Gln Leu Gly Asp Gly Asn Phe Leu His Gly Phe Asp Lys Ile
210     215     220
Val Gln Asp Thr Pro Glu Lys Leu Asn Gly Phe Gly Lys Val Asp Ser
225     230     235     240
Asp Val Val Pro Trp Pro Thr Leu Phe Phe Gly Met Phe Phe Asn Asn
245     250     255
Leu Phe Phe Trp Cys Ala Asn Gln Met Ile Val Gln Lys Ala Leu Ala
260     265     270
Ala Lys Asn Leu Lys Glu Ser Gln Lys Gly Ala Ile Tyr Leu Ser Leu
275     280     285
Phe Lys Val Phe Gly Pro Leu Ile Thr Val Leu Pro Gly Val Val Ala
290     295     300
Phe Asn Tyr Phe Asn Gly Ser Ile Asp Lys Ser Asp Asn Ala Tyr Pro
305     310     315     320
Ala Leu Val Thr Ser Val Leu Pro Glu Trp Ala Phe Gly Leu Phe Gly
325     330     335
Ala Val Ile Phe Gly Ala Ile Leu Ser Ser Phe Val Gly Ser Leu Asn
340     345     350
Ser Thr Thr Thr Leu Leu Thr Leu Asp Phe Tyr Lys Pro Ile Phe Gly
355     360     365
Lys Asn Lys Ser Asp Lys His Ile Ala Arg Val Gly His Ile Ala Thr
370     375     380
Val Val Ile Gly Val Ile Val Val Ala Leu Ala Pro Val Ile Ser Leu
385     390     395     400
Phe Pro Ser Gly Leu Tyr Ala Val Val Gln Gln Phe Asn Gly Val Tyr
405     410     415
Ser Met Pro Val Leu Ala Leu Ile Leu Val Ala Phe Phe Ser Lys Arg
420     425     430

```

Thr Ser Lys Leu Gly Ala Lys Val Thr Leu Phe Thr His Ile Ile Leu
 435 440 445
 Tyr Ala Ile Ile Ser Phe Val Phe Thr Glu Ile Asn Tyr Leu Tyr Thr
 450 455 460
 Phe Ser Val Leu Phe Phe Val Asp Leu Ile Ile Ile Leu Ile Phe Asn
 465 470 475 480
 Lys Val Lys Pro Ser Ser Glu Phe Asp Leu Ser Thr His Gln Pro Lys
 485 490 495
 Val Asp Met Thr Pro Trp Lys Tyr Arg Tyr Val Ala Gly Ile Ile Val
 500 505 510
 Leu Ala Leu Val Val Val Ser Tyr Ile Ile Phe Ser Pro Leu Val Leu
 515 520 525
 Ala Lys
 530

<210> 5049

<211> 533

<212> PRT

<213> S.epidermidis

<400> 5049

Asp Ile Val Phe Asn Leu Tyr Ile Ile Lys Leu Cys Leu Phe Pro Val
 1 5 10 15
 Leu Glu Glu Val Asn Ser Met Ser Gln Ile Ala Phe Tyr Ile Leu Ser
 20 25 30
 Asp Val His Gly Phe Ile Phe Pro Thr Asp Phe Ser Ser Arg Glu Lys
 35 40 45
 Asp Leu Pro Met Gly Leu Leu Lys Ala Asn His Leu Ile Glu Gln Asp
 50 55 60
 Cys Val His Tyr Asp Gly Ser Val Lys Ile Asp Asn Gly Asp Phe Leu
 65 70 75 80
 Gln Gly Ser Pro Leu Cys Asn Tyr Leu Val Ser Lys Leu Lys Ser Ser
 85 90 95
 Leu Pro Leu Thr Ser Ile Tyr Asn Arg Leu Gly Phe Asp Phe Gly Thr
 100 105 110
 Val Gly Asn His Glu Phe Asn Tyr Asp Leu Pro Tyr Leu Lys Gln Ala
 115 120 125
 Ile Asn Gln Leu His Tyr Pro Val Leu Cys Ala Asn Ile Ile Glu Asn
 130 135 140
 Thr Gln Pro Phe Thr Gly Gln Gly Ile His Tyr Phe Lys Val Asn Gly
 145 150 155 160
 Leu Thr Ile Gly Thr Ile Gly Leu Thr Thr Gln Tyr Ile Pro His Trp
 165 170 175
 Glu Gln Pro Asp Tyr Ile Lys Thr Leu Asn Phe Asn Ser Ala Ile His
 180 185 190
 Thr Leu Lys Ser Glu Leu Pro Thr Leu Arg Glu Lys Ser Asp Ile Val
 195 200 205
 Val Val Ser Tyr His Gly Gly Phe Glu Arg Asp Leu Asp Ser Gly Leu
 210 215 220
 Pro Thr Glu Ala Leu Thr Gly Glu Asn Glu Gly Tyr Asp Ile Leu Arg
 225 230 235 240
 Gln Phe Ser Asp Ser Ile Asp Val Leu Ile Thr Gly His Gln His Arg
 245 250 255
 Asp Ile Ala Thr Ile Lys Asn Gln Thr Ala Ile Ile Gln Pro Gly Ser
 260 265 270
 Lys Gly Thr Lys Val Gly Lys Ile Val Ile Glu Tyr Thr His Asp Lys

275 280 285
 Lys Val Leu Ile Lys Glu Cys Asn Leu Met Asn Val His Asn Ser Thr
 290 295 300
 Ser Phe Lys Pro Asn Asp Glu Asp Ile Ala Leu Arg Asn Gln Leu Glu
 305 310 315 320
 Asp Trp Leu Asp Thr Gln Ile Ala Glu Leu Pro Tyr Ala Met Arg Ile
 325 330 335
 Asn Asn Ser Phe Glu Ala Arg Lys Ser Pro His Ala Phe Val Asn Leu
 340 345 350
 Leu Asn Tyr Ile Leu Leu Glu Lys Ser Gly Ala Asp Ile Ala Cys Thr
 355 360 365
 Ala Leu Phe Asp Ser Ala Asn Gly Phe Asp Glu Lys Val Thr Met Arg
 370 375 380
 Asp Ile Ile Asn Asn Tyr Pro Phe Pro Asn Thr Phe Lys Val Ile Glu
 385 390 395 400
 Leu Ser Gly Lys Asp Ile Lys Leu Ala Ile Glu Arg Ser Ala Ser Tyr
 405 410 415
 Phe Asp Ile Val Asn His Lys Ile Thr Val Asn Lys Glu Phe Leu Glu
 420 425 430
 Pro Lys Pro Gln His Phe Asn Tyr Asp Ile Phe Ala Gly Ile Gln Tyr
 435 440 445
 Thr Ile His Val Ser His Pro Tyr Gly Glu Arg Val Ser Asp Leu Leu
 450 455 460
 Ile Asn Asp Ala Pro Leu Gln Ser Asp Gln Ile Tyr Thr Ile Cys Val
 465 470 475 480
 Asn Asn Tyr Arg Ala Val Gly Gly Gly Asn Tyr Asp Met Tyr Val Asn
 485 490 495
 Lys Pro Val Ile Lys Asp Ile Gln Ile Glu Gly Ala Gln Leu Leu Ile
 500 505 510
 Asp Tyr Leu Ser His Asn Asp Leu Ser Gln Ile Pro Gln Val Ile Asp
 515 520 525
 Phe Asn Val Val Lys
 530

<210> 5050

<211> 502

<212> PRT

<213> S.epidermidis

<400> 5050

Lys Val Gly Ile Lys Thr Met Ile Tyr Thr Val Thr Ser Thr Leu Pro
 1 5 10 15
 Leu Val His Gly Gly Arg Thr Lys Ser Leu Leu Thr Arg Ile Arg Phe
 20 25 30
 Leu Asp Lys Glu Met Gly Ile His Asn Lys Ile Leu Thr Thr Asn Tyr
 35 40 45
 Asn Ala Asn Tyr Asn Glu Val Tyr Gln Lys Phe Glu Glu Asn Gln Leu
 50 55 60
 Ile Thr Lys Asn Thr Gln Ile Glu Asn Ile Tyr Asp Trp Leu Ser Asp
 65 70 75 80
 Phe Lys Leu Leu Ser Ile Pro Lys Ser Arg Phe Lys Lys Lys Thr Leu
 85 90 95
 Tyr Ser Glu Lys Asp Arg Asp Ile Glu Gly Leu Thr Ser Lys Ala Phe
 100 105 110
 Asn Asp Gly Asn Val Met Arg Tyr Tyr Asp Gln Glu Thr Tyr Val Leu
 115 120 125

5050
 502
 PRT
 S.epidermidis

Tyr Arg Lys Phe Tyr Glu Asp Thr Asn Ile Ile Glu Phe Glu Asp Val
 130 135 140
 Met Ser Pro Ile Ser Lys Lys Lys Ile Glu Arg Arg Glu Tyr Asn His
 145 150 155 160
 Phe Gly Gln Leu His Arg Lys Ile Tyr Phe Ser Ser Arg Thr Tyr His
 165 170 175
 Lys Ile Leu Glu Glu Tyr Phe Asp Thr Glu Gly Ser Ile Tyr Cys Lys
 180 185 190
 Lys Phe Phe Asn Ser Gln Lys Ala Asn Glu Leu Asp Phe Ile Gln Ile
 195 200 205
 Phe Lys Asn Gln Arg Ile Met Lys Ala Phe Lys Asn Glu Lys Asp Leu
 210 215 220
 Phe Lys Tyr Tyr Phe Glu His Arg Phe Lys Gln Asn Asp Ile Val Phe
 225 230 235 240
 Asn Asp Ala Arg Leu Asp Lys Pro Leu Leu Asn Asn Cys Met Asn
 245 250 255
 Thr Lys Asn Val Leu Val Phe His Asn Ser His Ile Asp Gly Asp Asn
 260 265 270
 Ile Lys Ser Ser Tyr Lys Ile Ala Leu Glu Asn Ser Asp Lys Val Ala
 275 280 285
 Gln Tyr Leu Leu Leu Thr His Met Gln Lys Asp Asp Ile Gln His Ala
 290 295 300
 Tyr Gly Ile Ser Asp Glu Lys Ile Ser Ile Val Pro His Phe Ile Lys
 305 310 315 320
 Ser Tyr Gly Gln Lys Asp Thr His His Lys Glu Asp Arg Phe Val Phe
 325 330 335
 Ile Gly Arg Leu Gly Lys Gln Lys Gln Val Asp His Leu Ile Lys Ser
 340 345 350
 Tyr Asn Gln Phe Leu Lys Asn Gly His Gln Thr Lys Leu Ala Ile Tyr
 355 360 365
 Gly Ala Asp Glu Gln Asn Gln Lys Gln Val Ile Leu Asp Leu Val Lys
 370 375 380
 Glu Tyr Gln Ile Glu Asp Lys Val Asp Leu Asn Asp Phe Thr Lys His
 385 390 395 400
 Pro Leu Glu Glu Phe Lys Lys Ser Lys Ala Ser Leu Leu Thr Ser Glu
 405 410 415
 Tyr Glu Gly Phe Gly Leu Thr Val Met Glu Ser Ile Glu Val Gly Cys
 420 425 430
 Pro Val Ile Ser Tyr Asp Val Arg Tyr Gly Pro Gly Glu Ile Ile Glu
 435 440 445
 His Gly Glu Asn Gly Tyr Leu Val Glu Pro Asp Asn Ile Glu Ala Phe
 450 455 460
 Ala Ala Tyr Met Asp Lys Ile Ile Lys Asn Pro Leu Lys His Val Lys
 465 470 475 480
 Thr Lys Glu Thr Leu Lys Tyr Glu Gln Ala Lys Asn Asn Tyr Gln Lys
 485 490 495
 Leu Phe Glu Arg Val Lys
 500

<210> 5051

<211> 45

<212> PRT

<213> S.epidermidis

<400> 5051

Thr Ala Val Phe Val Ser Thr Ile Pro Thr Lys Ile Met Ile Val Lys

2022

1	5	10	15
Pro Met Ile Asp Thr Ala Pro Ile Val Ile Gly Trp Val Ile Gln Ala			
	20	25	30
Met Met Val Asp Thr Lys Ile Ala Asn Ile Asn Gln Ala			
	35	40	45

<210> 5052
 <211> 263
 <212> PRT
 <213> S.epidermidis

<400> 5052

Gly Val Val Leu Leu Ser Asn Ser Lys Lys Val Ala Val Val Thr Gly			
1	5	10	15
Ala Ala Gln Gly Ile Gly Leu Lys Ile Ala Glu Arg Leu Phe Glu Asp			
	20	25	30
Gly Tyr Ser Ile Ala Leu Val Asp Phe Asn Glu Ala Val Ala Lys Glu			
	35	40	45
Ser Ala Glu Lys Leu Ser Lys Glu Gly Gln Glu Ala Val Ala Phe Lys			
	50	55	60
Ala Asp Val Ser Asn Arg Asp Gln Val Phe Ser Val Leu Asn Gln Val			
	65	70	75
Val Glu His Phe Gly Asp Leu Asn Val Leu Val Asn Asn Ala Gly Leu			
	85	90	95
Gly Pro Met Thr Pro Ile Glu Ser Val Thr Pro Glu Gln Phe Asn Gln			
	100	105	110
Val Val Gly Val Asn Val Gly Gly Val Phe Trp Gly Ile Gln Ala Ala			
	115	120	125
Ile Glu Gln Phe Asp Lys Leu Gly His Gly Gly Lys Ile Ile Asn Ala			
	130	135	140
Thr Ser Gln Ala Gly Val Glu Gly Asn Ala Gly Leu Ser Leu Tyr Ser			
	145	150	155
Ser Thr Lys Phe Ala Val Arg Gly Leu Thr Gln Val Ala Ala Arg Asp			
	165	170	175
Leu Ala Glu Lys Asn Ile Thr Val Asn Ala Phe Ala Pro Gly Ile Val			
	180	185	190
Glu Thr Pro Met Met Lys Gly Ile Ala Glu Lys Leu Ala Glu Glu Asn			
	195	200	205
Asn Gln Pro Met Glu Trp Gly Trp Lys Gln Phe Thr Asp Gln Ile Ala			
	210	215	220
Leu Lys Arg Leu Ser Lys Pro Glu Asp Val Ala Asn Val Val Ser Phe			
	225	230	235
Leu Ala Gly Ser Asp Ser Asp Tyr Ile Thr Gly Gln Thr Ile Ile Val			
	245	250	255
Asp Gly Gly Met Arg Phe His			
	260		

<210> 5053
 <211> 58
 <212> PRT
 <213> S.epidermidis

<400> 5053

Asn Phe Asn Phe Ile Asn Val Ile Thr Thr Ser Ile Leu Gln Cys Ile			
1	5	10	15
Ser Cys Ile Tyr Ile Asn Thr Ile Thr Ile Leu Ile Tyr Asn Ser Leu			


```
<210> 5058
<211> 1259
<212> PRT
<213> S.epidermidis
```

Tyr 1	Asn	Asp	Phe	Val 5	Lys	Lys	Cys	Thr	Ile 10	Lys	Ile	Arg	His	Asn 15	Thr
Tyr	Ala	Leu	Arg 20	Lys	Asp	Ile	Thr	Leu 25	Tyr	Gly	Gly	Arg	Ile 30	Asn	Lys
Met	Gly	Lys 35	Phe	Gly	Leu	Asn	Phe 40	Phe	Lys	Pro	Thr	Glu 45	Lys	Phe	Asn
Gly	Asn 50	Trp	Ser	Val	Leu	Glu 55	His	Lys	Ser	Arg	Glu 60	Trp	Glu	Lys	Met
Tyr 65	Arg	Glu	Arg	Trp 70	Ser	His	Asp	Lys	Val 75	Val	Arg	Thr	Thr	His	Gly 80
Val	Asn	Cys	Thr 85	Gly	Ser	Cys	Ser	Trp	Lys 90	Val	Phe	Val	Lys	Asn 95	Gly
Val	Ile	Thr 100	Trp	Glu	Asn	Gln	Gln 105	Ile	Asp	Tyr	Pro	Ser	Cys 110	Gly	Pro
Asp	Met	Pro 115	Glu	Phe	Glu	Pro	Arg 120	Gly	Cys	Pro	Arg	Gly 125	Ala	Ser	Phe
Ser	Trp 130	Tyr	Glu	Tyr	Ser	Pro 135	Leu	Arg	Val	Lys	Tyr 140	Pro	Tyr	Ile	Arg
Gly 145	Lys	Leu	Leu	Asp 150	Leu	Trp	Thr	Glu	Ala 155	Leu	Glu	Glu	Gln	Asn 160	Gly 165
Asn	Arg	Ile	Ala 165	Ala	Trp	Ala	Ser	Ile 170	Val	Glu	Asn	Glu	Glu 175	Lys	Ala 180
Lys	Gln	Tyr 180	Lys	Glu	Ala	Arg	Gly 185	Lys	Gly	Gly	His	Val	Arg 190	Ala	Asn
Trp	Lys 195	Asp	Val	Thr	Asp	Ile 200	Ile	Ala	Ala	Gln	Ile 205	Leu	Tyr	Thr	Ile
Lys	Lys 210	Asp	Gly	Pro	Asp 215	Arg	Ile	Ala	Gly	Phe	Thr 220	Pro	Ile	Pro	Ala
Met 225	Ser	Met	Ile	Ser 230	Tyr	Ala	Ser	Gly	Ala 235	Arg	Phe	Ile	Asn	Leu 240	Leu
Gly	Gly	Glu	Met 245	Leu	Ser	Phe	Tyr	Asp 250	Trp	Tyr	Ala	Asp	Leu 255	Pro	Pro
Ala	Ser	Pro 260	Gln	Ile	Trp	Gly	Glu 265	Gln	Thr	Asp	Val 270	Pro	Glu	Ser	Ser
Asp	Trp 275	Tyr	Asn	Ala	Ser	Tyr 280	Ile	Met	Met	Trp	Gly 285	Ser	Asn	Val	Pro
Leu	Thr 290	Arg	Thr	Pro	Asp 295	Ala	His	Phe	Met	Thr 300	Glu	Val	Arg	Tyr	Lys
Gly 305	Ala	Lys	Val	Ile 310	Ser	Val	Ala	Pro	Asp 315	Tyr	Ala	Glu	Asn	Val 320	Lys
Phe	Ala	Asp	His 325	Trp	Leu	Ala	Pro	His 330	Pro	Gly	Thr	Asp	Ala 335	Ala	Val
Ala	Gln	Ala 340	Met	Thr	His	Val	Ile 345	Leu	Gln	Glu	Tyr 350	Tyr	Glu	Asn	Gln
Pro	Asn 355	Asp	Met	Phe	Ile	Asn 360	Tyr	Ala	Lys	Gln	Tyr 365	Ser	Asp	Met	Pro

Phe	Val	Ile	Met	Leu	Asp	Glu	Asp	Glu	Asn	Gly	Tyr	Lys	Ala	Gly	Arg
370						375					380				
Phe	Leu	Arg	Ala	Ser	Asp	Leu	Gly	Met	Ser	Gly	Glu	Asn	Asn	Glu	Trp
385					390					395					400
Lys	Pro	Val	Ile	Gln	Asp	Lys	Leu	Ser	Gln	Gln	Leu	Leu	Val	Pro	Asn
				405					410					415	
Gly	Thr	Met	Gly	Gln	Arg	Trp	Glu	Glu	Gly	Lys	Lys	Trp	Asn	Leu	Lys
		420					425					430			
Leu	Glu	Thr	Glu	Asp	Gly	Thr	Pro	Ile	Asp	Pro	Met	Leu	Ser	Met	Val
	435					440					445				
Glu	Ser	Asp	Tyr	His	Val	Glu	Thr	Ile	Gln	Phe	Pro	Tyr	Phe	Asp	Ser
450					455					460					
Ser	Gly	Asp	Gly	Ile	Phe	Glu	Arg	Pro	Ile	Ala	Thr	Arg	Thr	Ile	Gln
465				470					475						480
Leu	Ala	Asn	Gly	Glu	Glu	Val	Lys	Ile	Ala	Thr	Val	Tyr	Asp	Leu	Met
			485					490						495	
Thr	Ser	Gln	Tyr	Gly	Val	Gln	Arg	Phe	Glu	His	Glu	Leu	Glu	Ala	Thr
		500						505				510			
Ser	Tyr	Asp	Asp	Ala	Ser	Ser	Lys	Tyr	Thr	Pro	Ala	Trp	Gln	Glu	Gln
	515						520				525				
Ile	Thr	Gly	Ile	Lys	Lys	Glu	Leu	Val	Thr	Lys	Val	Ala	Lys	Glu	Phe
530						535					540				
Ala	Gln	Asn	Ala	Ile	Asp	Thr	Gly	Gly	Arg	Ser	Met	Ile	Ile	Met	Gly
545					550					555					560
Ala	Gly	Ile	Asn	His	Trp	Phe	Asn	Ser	Asp	Thr	Ile	Tyr	Arg	Ser	Ile
			565						570					575	
Leu	Asn	Leu	Val	Leu	Leu	Cys	Gly	Cys	Gln	Gly	Val	Asn	Gly	Gly	Gly
		580						585				590			
Trp	Ala	His	Tyr	Val	Gly	Gln	Glu	Lys	Cys	Arg	Pro	Ile	Glu	Gly	Trp
	595					600						605			
Asn	Thr	Ile	Ala	Phe	Ala	Lys	Asp	Trp	Gln	Gly	Pro	Pro	Arg	Leu	Gln
610						615					620				
Asn	Gly	Thr	Ser	Trp	Phe	Tyr	Phe	Ala	Thr	Asp	Gln	Trp	Lys	Tyr	Glu
625					630					635					640
Glu	Ser	Asn	Val	Asp	Lys	Leu	Lys	Ser	Pro	Leu	Ala	Glu	Asn	Ile	Lys
			645						650					655	
His	Gln	His	Pro	Ala	Asp	Tyr	Asn	Val	Thr	Ala	Ala	Arg	Met	Gly	Trp
		660						665				670			
Leu	Pro	Ser	Tyr	Pro	Gln	Phe	Asn	Lys	Asn	Ser	Leu	Leu	Phe	Gly	Glu
	675						680				685				
Glu	Ala	Lys	Asp	Glu	Gly	Asp	Asp	Ser	Asn	Glu	Ala	Ile	Leu	Gln	Lys
690					695					700					
Ala	Ile	Glu	Ser	Val	Lys	Asn	Lys	Asp	Thr	Gln	Phe	Ala	Ile	Glu	Asp
705					710					715					720
Pro	Asp	Leu	Arg	Lys	Asn	His	Pro	Lys	Thr	Leu	Phe	Val	Trp	Arg	Ser
			725						730				735		
Asn	Leu	Ile	Ser	Ser	Ala	Lys	Gly	Gln	Glu	Tyr	Phe	Met	Lys	His	
		740					745					750			
Leu	Leu	Gly	Ala	Arg	Ser	Gly	Leu	Met	Ala	Glu	Pro	Asn	Glu	Asp	Asp
	755						760					765			
Lys	Pro	Glu	Glu	Ile	Lys	Trp	Arg	Glu	Asp	Thr	Glu	Gly	Lys	Leu	Asp
770						775					780				
Leu	Leu	Val	Ser	Leu	Asp	Phe	Arg	Met	Thr	Ala	Thr	Pro	Leu	Tyr	Ser
785					790					795					800
Asp	Ile	Val	Leu	Pro	Ala	Ala	Thr	Trp	Tyr	Glu	Lys	His	Asp	Leu	Ser
				805					810					815	

Ser Thr Asp Met His Pro Phe Ile His Pro Phe Asn Pro Ala Ile Asp
 820 825 830
 Pro Leu Trp Glu Ser Arg Ser Asp Trp Asp Ile Tyr Lys Thr Leu Ser
 835 840 845
 Lys Ala Val Ser Glu Met Ala Lys Asp Tyr Leu Pro Gly Lys Phe Lys
 850 855 860
 Asp Val Val Thr Thr Pro Leu Gly His Asp Ser Lys Gln Glu Ile Ser
 865 870 875 880
 Thr Glu Tyr Gly Ile Val Lys Asp Trp Ser Lys Gly Glu Ile Glu Gly
 885 890 895
 Val Pro Gly Lys Thr Met Pro Asn Phe Ser Ile Val Glu Arg Asp Tyr
 900 905 910
 Thr Gln Ile Tyr Asp Lys Phe Val Thr Val Gly Pro Lys Leu Glu Lys
 915 920 925
 Gly Lys Ile Gly Ala His Gly Val Ser Tyr Ser Val Ser Glu Glu Tyr
 930 935 940
 Glu Glu Leu Lys Ser Met Val Gly Thr Trp Asn Asp Asp Asn Thr Thr
 945 950 955 960
 Ser Val Lys Asn Asp Arg Pro Arg Ile Asp Thr Ala Arg Lys Val Ala
 965 970 975
 Asp Val Ile Leu Asn Ile Ser Ser Ala Thr Asn Gly Lys Leu Ser Gln
 980 985 990
 Lys Ser Tyr Glu Asp Leu Glu Asn Gln Thr Gly Met Glu Leu Lys Asp
 995 1000 1005
 Ile Ser Lys Glu Arg Ala Ser Glu Lys Ile Ser Phe Leu Asn Ile Thr
 1010 1015 1020
 Ser Gln Pro Arg Glu Val Ile Pro Thr Ala Val Phe Pro Gly Ser Asn
 1025 1030 1035 1040
 Lys Asp Gly Arg Arg Tyr Ser Pro Phe Thr Thr Asn Val Glu Arg Leu
 1045 1050 1055
 Val Pro Phe Arg Thr Leu Thr Gly Arg Gln Ser Tyr Tyr Ile Asp His
 1060 1065 1070
 Glu Val Phe Gln Gln Phe Gly Glu Ser Leu Pro Val Tyr Lys Pro Thr
 1075 1080 1085
 Leu Pro Pro Met Val Phe Gly Ala Arg Asp Lys Lys Val Lys Gly Gly
 1090 1095 1100
 Gln Asp Thr Leu Val Leu Arg Tyr Leu Thr Pro His Gly Lys Trp Asn
 1105 1110 1115 1120
 Ile His Ser Thr Tyr Gln Asp Asn Glu Arg Met Leu Thr Leu Phe Arg
 1125 1130 1135
 Gly Gly Pro Val Val Trp Ile Ser Asn Glu Asp Ala Ala Asp His Gly
 1140 1145 1150
 Ile Asn Asp Asn Asp Trp Leu Glu Val Tyr Asn Arg Asn Gly Val Val
 1155 1160 1165
 Thr Ala Arg Ala Val Thr Ser His Arg Met Pro Arg Gly Thr Met Phe
 1170 1175 1180
 Met Tyr His Ala Gln Asp Lys His Ile Glu Thr Pro Gly Ser Glu Ile
 1185 1190 1195 1200
 Thr Asp Thr Arg Gly Ser His Asn Ala Pro Thr Arg Ile His Leu
 1205 1210 1215
 Lys Pro Thr Gln Leu Val Gly Gly Tyr Ala Gln Ile Ser Tyr His Phe
 1220 1225 1230
 Asn Tyr Tyr Gly Pro Ile Gly Asn Gln Arg Asp Glu Tyr Val Ala Val
 1235 1240 1245
 Arg Lys Met Lys Glu Val Asn Trp Leu Glu Asp
 1250 1255

<210> 5059
 <211> 167
 <212> PRT
 <213> S.epidermidis

<400> 5059

```

Leu Pro Pro Val Pro Phe Ile Leu Leu Met Ser Asn Pro Leu Ser Ser
1      5      10      15
Ala Ile Leu Arg Ala Arg Gly Glu Ile Lys Ile Leu Ser Arg Ala Ala
      20      25      30
Leu Leu Gly Glu Leu Ser Leu Leu Ser Glu Asp Gly Cys Asp Val Ser
      35      40      45
Leu Thr Ser Cys Val Ser Phe Ser Cys Ser Leu Ser Ser Phe Thr Phe
      50      55      60
Ser Asp Ala Lys Ser Ser Ser Ser Leu Ser Ile Ala Ser Pro Ser Ser
65      70      75      80
Pro Ile Ile Pro Asn Thr Ala Leu Thr Ser Ala Ser Ser Pro Ala Cys
      85      90      95
Thr Leu Ile Ser Asn Asn Val Pro Leu Ala Gly Ala Ser Thr Ser Leu
      100      105      110
Val Asn Phe Ser Glu Leu Ile Val Thr Ile Leu Ser Pro Cys Phe Thr
      115      120      125
Val Ser Pro Ser Asp Leu Asn His Ser Ser Thr Val Pro Ser Phe Ile
      130      135      140
Val Ile Pro Ser Phe Gly Ile Ile Ile Phe Ser Leu Ile Val Ile His
145      150      155      160
Leu Leu Cys Val Ser Leu Phe
      165

```

<210> 5060
 <211> 44
 <212> PRT
 <213> S.epidermidis

<400> 5060

```

His Tyr Ala Val Pro His Phe Thr Thr Phe Ser Arg Lys Ser Asn Ser
1      5      10      15
His Ile Ile Leu Phe Leu Met Tyr Lys Ser His Asn Ile His Asn Phe
      20      25      30
Ile Leu Ile Thr Lys His Leu Pro Met Phe Tyr Glu
      35      40

```

<210> 5061
 <211> 234
 <212> PRT
 <213> S.epidermidis

<400> 5061

```

Met Thr Asn Val Leu Tyr Gln His Gly Thr Leu Gly Thr Leu Met Ala
1      5      10      15
Gly Leu Leu Glu Gly Thr Ala Ser Ile Asn Asp Leu Leu Glu His Gly
      20      25      30
Asp Leu Gly Ile Ala Thr Leu Thr Gly Ser Asp Gly Glu Val Ile Phe
      35      40      45
Val Asp Gly Lys Ala Tyr His Ala Asn Glu His Lys Glu Phe Ile Glu

```

50		55		60
Leu Thr Gly Asp Glu Met Thr Pro Tyr Ala Thr Val Thr Lys Phe Lys				
65		70		75
Ala Asp Ser Ser Phe Lys Thr Ser Asn Lys Asn Gln Glu Glu Val Phe				80
	85		90	95
Asp Glu Val Lys Lys Gln Met Lys Ser Glu Asn Met Phe Ser Ala Val				
	100		105	110
Lys Ile Ser Gly Thr Phe Lys Lys Met His Val Arg Met Met Pro Gly				
	115		120	125
Gln Glu Pro Pro Tyr Thr Arg Leu Ile Asp Ser Ala Arg Arg Gln Pro				
	130		135	140
Glu Glu Thr Arg Glu Asn Ile Lys Gly Ser Ile Val Gly Phe Phe Thr				
145		150		155
Pro Glu Leu Phe His Gly Ile Gly Ser Ala Gly Phe His Ile His Phe				160
	165		170	175
Ala Asn Asp Asp Arg Asp Phe Gly Gly His Ile Leu Asp Phe Glu Val				
	180		185	190
Asp Asp Val Thr Val Glu Ile Gln Asn Phe Glu Thr Phe Glu Gln His				
	195		200	205
Phe Pro Val Asp Ala Lys Ser Phe Thr Asp Ala Asp Ile Asp Tyr Lys				
	210		215	220
Asp Ile Ala Asp Glu Ile Arg Glu Ala Glu				
225		230		

<210> 5062

<211> 590

<212> PRT

<213> S.epidermidis

<400> 5062

Glu Arg Asp Val Asn Lys Gln Arg Lys Gln Ile Asn Phe Trp Arg Ser				
1	5		10	15
Leu Thr Met Arg Arg Lys Arg Asp Ser Tyr Asp Tyr Val Ile Ile Gly				
	20		25	30
Gly Gly Ser Ala Gly Ser Val Leu Gly Ala Arg Leu Ser Glu Asp Lys				
	35		40	45
Asp Lys Asn Val Leu Val Leu Glu Ala Gly Arg Ser Asp Tyr Phe Trp				
	50		55	60
Asp Leu Phe Ile Gln Met Pro Ala Ala Leu Met Phe Pro Ser Gly Asn				
65		70		75
Arg Phe Tyr Asp Trp Glu Tyr Gln Thr Asp Glu Glu Pro His Met Gly				
	85		90	95
Arg Arg Val Asp His Ala Arg Gly Lys Val Leu Gly Gly Ser Ser Ser				
	100		105	110
Ile Asn Gly Met Ile Tyr Gln Arg Gly Asn Pro Met Asp Tyr Glu Gly				
	115		120	125
Trp Ala Glu Pro Glu Gly Met Asp Thr Trp Asp Phe Ala His Cys Leu				
	130		135	140
Pro Tyr Phe Lys Lys Leu Glu Thr Thr Tyr Gly Ala Ala Pro Tyr Asp				
145		150		155
Lys Val Arg Gly His Asp Gly Pro Ile Lys Leu Lys Arg Gly Pro Ala				
	165		170	175
Thr Asn Pro Leu Phe Lys Ser Phe Phe Asn Ala Gly Val Glu Ala Gly				
	180		185	190
Tyr His Lys Thr Ala Asp Val Asn Gly Tyr Arg Gln Glu Gly Phe Gly				
	195		200	205

Pro Phe Asp Ser Gln Val His His Gly Arg Arg Met Ser Ala Ser Arg
 210 215 220
 Ala Tyr Leu Arg Pro Ala Leu Arg Arg Arg Asn Leu Asp Val Glu Thr
 225 230 235 240
 Arg Ala Phe Val Thr Lys Leu Ile Phe Asp Glu Asn Asn Ser Lys Lys
 245 250 255
 Val Thr Gly Val Thr Phe Lys Lys Asn Gly Lys Glu His Thr Val His
 260 265 270
 Ala Asn Glu Val Ile Leu Ser Gly Gly Ala Phe Asn Thr Pro Gln Leu
 275 280 285
 Leu Gln Leu Ser Gly Ile Gly Asp Ser Glu Phe Leu Lys Ser Lys Gly
 290 295 300
 Ile Glu Pro Arg Met His Leu Pro Gly Val Gly Glu Asn Phe Glu Asp
 305 310 315 320
 His Leu Glu Val Tyr Ile Gln His Lys Cys Lys Gln Pro Val Ser Leu
 325 330 335
 Gln Pro Ser Leu Asp Val Lys Arg Met Pro Phe Ile Gly Leu Gln Trp
 340 345 350
 Ile Phe Ala Arg Lys Gly Ala Ala Ala Ser Asn His Phe Glu Gly Gly
 355 360 365
 Gly Phe Val Arg Ser Asn Asp Asp Val Asp Tyr Pro Asn Leu Met Phe
 370 375 380
 His Phe Leu Pro Ile Ala Val Arg Tyr Asp Gly Gln Lys Ala Pro Val
 385 390 395 400
 Ala His Gly Tyr Gln Val His Val Gly Pro Met Tyr Ser Asn Ser Arg
 405 410 415
 Gly Ser Leu Lys Ile Lys Ser Lys Asp Pro Phe Glu Lys Pro Ser Ile
 420 425 430
 Val Phe Asn Tyr Leu Ser Thr Lys Glu Asp Glu Arg Glu Trp Val Glu
 435 440 445
 Ala Ile Arg Val Ala Arg Asn Ile Leu Lys Gln Lys Ala Met Asp Pro
 450 455 460
 Phe Asn Gly Gly Glu Ile Ser Pro Gly Pro Gln Val Gln Thr Asp Glu
 465 470 475 480
 Glu Ile Leu Asp Trp Val Arg Lys Asp Gly Glu Thr Ala Leu His Pro
 485 490 495
 Ser Cys Ser Ala Lys Met Gly Pro Ala Ser Asp Pro Met Ala Val Val
 500 505 510
 Asp Pro Leu Thr Met Lys Val His Gly Met Glu Asn Leu Arg Val Val
 515 520 525
 Asp Ala Ser Ala Met Pro Arg Thr Thr Asn Gly Asn Ile His Ala Pro
 530 535 540
 Val Leu Met Leu Ala Glu Lys Ala Ala Asp Ile Ile Arg Gly Arg Lys
 545 550 555 560
 Pro Leu Glu Pro Gln Tyr Val Asp Tyr Tyr Lys His Gly Ile Asp Asp
 565 570 575
 Glu Lys Ala Gly Ala Met Glu Asp Asp Pro Phe Tyr Gln Tyr
 580 585 590

<210> 5063

<211> 45

<212> PRT

<213> S.epidermidis

<400> 5063

Glu Ala Cys Val Asn Ile Val Ser Phe Leu Leu Cys Ala Ile Ser Arg

1		5		10		15									
Val	Val	Ile	Glu	Ile	Ile	Asp	Lys	Ile	Val	Ile	Lys	Lys	Met	Thr	Thr
		20				25							30		
Met	Thr	Asn	Ser	Phe	Ile	Phe	Ile	Glu	His	Pro	Leu	Leu			
		35				40						45			

<210> 5064
 <211> 43
 <212> PRT
 <213> S.epidermidis

<400> 5064
Ser Lys Cys Val Asn Ser Leu Phe Asn His Lys Glu Phe Lys Ile Asn
1 5 10 15
Leu Ser Val His Ser Ile Thr Ile Lys Ile Arg Lys Glu Pro Val Pro
20 25 30
Met Ile Asp Val Ser Gly Ser Ile Leu Ser Thr
35 40

<210> 5065
 <211> 153
 <212> PRT
 <213> S.epidermidis

<400> 5065
Gly Glu Ser Val Glu Pro Glu Ser Leu Lys His Asn Gln His Leu Gln
1 5 10 15
Met Asn Leu Asp Lys Leu Arg Ala Gln Glu Gly Tyr Asp Phe Gly Gly
20 25 30
Ile Ala Leu Tyr Asp Tyr His His Thr Ser Ser Pro Ile Lys Trp Gln
35 40 45
Tyr Val Ser Gly Asn Thr Asn Asp Arg Tyr Lys Leu Ile Ile Leu Arg
50 55 60
Lys Gly Arg Gly Leu Ala Gly Met Val Met Lys Thr Gly Lys Arg Met
65 70 75 80
Val Ile Ala Asp Val Asp Thr Ala Leu Ser Pro Glu Glu Lys Val Lys
85 90 95
Phe Pro Ile Ile Leu Ser Glu Ser Leu Thr Ala Val Val Ala Val Pro
100 105 110
Leu Trp Leu Glu Asn Ser Met Tyr Gly Val Leu Leu Leu Gly Gln Arg
115 120 125
Asn His Gln Pro Leu Pro Gln Ser Leu Asp Gln Leu Asn Ile Glu Lys
130 135 140
Gln Ile Gly Ile Phe Thr Glu Ile Asn
145 150

<210> 5066
 <211> 81
 <212> PRT
 <213> S.epidermidis

<400> 5066
Leu Glu Ser Val Asn Asn Met Ile Ser Val Asn Asn Gly Val Lys Asn
1 5 10 15
Lys Lys Tyr Lys Val Lys His Ile Gly Ile Ser Asn Lys Asn Met Leu
20 25 30

Tyr Arg Leu Gly Ala Leu Gly Leu Asn Ile Gly Ser Glu Ile Ser Ile
 35 40 45
 Lys Gln Lys Cys Leu Leu Asn Gly Pro Ser Val Val Glu Val Asn Gly
 50 55 60
 Gln His Leu Ser Leu Arg Gln Arg Asp Ala Arg Leu Ile Thr Leu Glu
 65 70 75 80
 Glu

<210> 5067

<211> 204

<212> PRT

<213> S.epidermidis

<400> 5067

Ile Arg Ser Val Lys Met Ser Glu Ser Asn His Ile Thr Trp His Asp
 1 5 10 15
 Ser Glu Val Thr Lys Lys Gln Arg Gln His Lys Asn Gly His Lys Ser
 20 25 30
 Ala Val Ile Trp Phe Thr Gly Leu Ser Gly Ser Gly Lys Ser Thr Val
 35 40 45
 Ser Val Ala Leu Glu Lys Glu Leu Phe Asn Glu Gly Lys Gln Thr Tyr
 50 55 60
 Arg Leu Asp Gly Asp Asn Val Arg His Gly Leu Asn Lys Asn Leu Gly
 65 70 75 80
 Phe Ser Pro Glu Asp Arg Ser Glu Asn Ile Arg Arg Ile Gly Glu Val
 85 90 95
 Ala Lys Leu Met Val Asp Ala Gly Ala Leu Thr Val Thr Ala Phe Ile
 100 105 110
 Ser Pro Tyr Lys Glu Asp Arg Glu Gly Val Arg Ala Leu Leu Glu Asp
 115 120 125
 Asn Glu Phe Ile Glu Val Tyr Thr Lys Cys Ser Val Glu Glu Cys Glu
 130 135 140
 Lys Arg Asp Pro Lys Gly Leu Tyr Lys Lys Ala Arg Ser Gly Glu Ile
 145 150 155 160
 Pro Glu Phe Thr Gly Ile Ser Ala Pro Tyr Gln Ala Pro Glu Asn Pro
 165 170 175
 Glu Ile Thr Ile Asp Thr Glu His Asp Thr Ile Glu Gln Ser Val Val
 180 185 190
 Gln Ile Ile Arg Tyr Leu Lys Glu His Glu Tyr Ile
 195 200

<210> 5068

<211> 49

<212> PRT

<213> S.epidermidis

<400> 5068

Arg Asn Phe Val Cys Ile Cys Thr Ser Arg Thr Leu Tyr Tyr Lys Arg
 1 5 10 15
 Arg Ser Lys Ile Lys Tyr Ile Arg Ser Gln Ser Leu Pro Asp His Lys
 20 25 30
 Val Val Val Asp Phe Phe Tyr Phe Lys Pro Glu Ser Leu Pro Gly Asn
 35 40 45
 Tyr

<210> 5069
 <211> 72
 <212> PRT
 <213> S.epidermidis

<400> 5069

```

Gly Lys Ile Val Asp Ile Leu Phe Ile Phe Gly Leu Leu Gly Gly Ala
1      5      10      15
Ala Thr Ser Leu Ala Leu Gly Val Pro Met Ile Ser Ala Gly Ile Glu
      20      25      30
Arg Leu Thr Gly Leu Asp Gly Ser Asn Met Ile Leu Arg Ser Ile Ile
      35      40      45
Leu Leu Thr Ile Thr Val Tyr Phe Arg Asn Gln Phe Leu His Arg Phe
      50      55      60
Glu Lys Arg Tyr Ser Lys Ile Lys
65      70

```

<210> 5070
 <211> 304
 <212> PRT
 <213> S.epidermidis

<400> 5070

```

Glu Thr Thr Val Ala Tyr Lys Gln Phe Ile Arg Phe Ala Gln His His
1      5      10      15
Leu His Phe His His Leu Gly Arg His Phe Met Val Ile Ser Lys Lys
      20      25      30
Leu Ser Leu Ile Thr Ile Gly Ile Leu Ile Ser Ile Leu Leu Ile Ser
      35      40      45
Leu Leu Ile Asp Gln Thr Ile Ser His Gln Phe Met Asn Gln Asn Ser
      50      55      60
Ile Phe Gly Thr Leu Phe Gln Asn Tyr Gly Leu Phe Pro Pro Thr Leu
65      70      75      80
Ile Leu Ile Ile Ser Thr Val Ile Leu Asn Tyr Tyr Ile Phe Thr Thr
      85      90      95
Phe Gln Asn Lys Leu Ala Lys Ile Leu Thr Leu Leu Ile Ser Phe Ile
      100      105      110
Phe Thr Leu Ile Lys Thr Asn Glu Phe Val Ser Glu Thr Ala Gln Tyr
      115      120      125
Met Leu Ser Thr Ser Ala Asn Ile Lys Asn His Lys Pro Met Gly Met
      130      135      140
Ala Asn Asn Glu Gly Asn Ala Gly Asn Ala Leu Ser Leu Gly Met Ser
145      150      155      160
Phe Phe Ile Ser Leu Ile Ile Leu Ile Ile Thr Phe Ile Cys Tyr
      165      170      175
Gln Phe Trp Leu Lys His Thr Asn Asn Gln Glu Leu Tyr His Leu Phe
      180      185      190
Lys Val Ser Leu Ile Ser Phe Met Ile Leu Phe Ile Gly Leu Glu Leu
      195      200      205
Val Asp Ser Leu Lys His Leu Trp Gly Arg Phe Arg Pro Tyr Glu Ile
      210      215      220
Thr Asp Lys Ala Gly His Phe Thr His Trp Leu Thr Ile Asn Gly Asn
225      230      235      240
Thr Gly His Ser Ser Phe Pro Ser Gly His Thr Gly Asn Gly Ala Phe
      245      250      255

```

Leu	Met	Phe	Ile	Ala	Phe	Tyr	Phe	Lys	Lys	Leu	Arg	Thr	Gln	Lys	Ile
			260					265					270		
Val	Phe	Ser	Ile	Gly	Leu	Cys	Tyr	Ser	Ile	Leu	Met	Ala	Leu	Ser	Arg
		275					280					285			
Ile	Arg	Ile	Gly	Ala	His	Phe	Thr	Asn	Asp	Tyr	Cys	Arg	Phe	Tyr	His
	290					295					300				

<210> 5071

<211> 349

<212> PRT

<213> S.epidermidis

<400> 5071

Met	Asn	Asn	Val	Lys	Glu	Ser	Ile	Ile	Val	Ala	Phe	Ala	Phe	Val	Gly
1			5						10					15	
Val	Val	Val	Gly	Ala	Gly	Phe	Ala	Thr	Gly	Gln	Glu	Ile	Phe	Gln	Phe
			20					25					30		
Phe	Thr	Ser	His	Gly	Ile	Tyr	Ser	Ile	Gly	Gly	Ile	Phe	Ile	Thr	Gly
		35				40						45			
Leu	Ile	Leu	Thr	Leu	Gly	Gly	Ile	Phe	Val	Leu	Asn	Thr	Gly	Phe	Arg
	50				55						60				
Leu	Arg	Ser	Gln	Asn	His	Ser	Glu	Ser	Ile	Arg	Tyr	Tyr	Leu	His	Pro
65				70						75				80	
Thr	Ile	Ala	Lys	Leu	Phe	Asp	Ile	Ile	Leu	Thr	Val	Phe	Leu	Phe	Ser
			85					90					95		
Leu	Ala	Ile	Ile	Met	Thr	Ala	Gly	Gly	Ala	Ser	Thr	Ile	Asn	Glu	Ser
			100				105						110		
Phe	Gly	Leu	Pro	Phe	Trp	Leu	Ser	Ser	Phe	Ile	Leu	Val	Ile	Leu	Ile
		115					120					125			
Leu	Ile	Thr	Leu	Phe	Leu	Lys	Phe	Asp	Arg	Leu	Ile	Ala	Val	Leu	Gly
	130					135						140			
Gly	Val	Thr	Pro	Phe	Leu	Val	Ala	Val	Val	Val	Met	Ile	Ala	Val	Tyr
145					150					155					160
Tyr	Phe	Ile	Thr	Gly	Asp	Leu	Asn	Phe	Ser	Asp	Val	Ser	Gln	Tyr	Ser
				165					170					175	
Asn	Gln	Asn	Lys	Ser	Ile	Ser	Pro	Gly	Trp	Trp	Phe	Asp	Ala	Ile	Asn
			180					185					190		
Tyr	Ala	Ser	Leu	Gln	Ile	Ala	Ala	Ala	Phe	Ser	Phe	Leu	Thr	Val	Met
		195				200						205			
Gly	Gly	Lys	Leu	Arg	Tyr	Gln	Ser	Ser	Thr	Ile	Tyr	Gly	Gly	Leu	Ile
	210					215					220				
Gly	Gly	Ile	Ile	Val	Thr	Leu	Leu	Leu	Leu	Leu	Ile	Asn	Phe	Gly	Leu
225					230					235					240
Val	Thr	Glu	Phe	Asn	Gln	Ile	Lys	Glu	Val	Ala	Leu	Pro	Ser	Leu	Leu
				245					250					255	
Leu	Ala	Lys	Gln	Ile	Ser	Pro	Ser	Ile	Gly	Ile	Ile	Met	Ser	Val	Ile
		260						265					270		
Met	Val	Leu	Val	Ile	Tyr	Asn	Thr	Val	Val	Gly	Leu	Met	Tyr	Ala	Phe
		275					280					285			
Ala	Ser	Arg	Phe	Ser	Arg	Pro	Phe	Thr	Lys	Arg	Tyr	Tyr	Ile	Leu	Ile
		290				295					300				
Val	Met	Met	Ala	Ile	Ile	Thr	Phe	Ala	Cys	Thr	Phe	Val	Gly	Phe	Ile
305					310					315					320
Ser	Leu	Ile	Gly	Lys	Val	Phe	Pro	Ile	Met	Gly	Leu	Phe	Gly	Phe	Ile
				325					330					335	
Leu	Leu	Ile	Pro	Val	Ile	Tyr	Lys	Gly	Ile	Leu	Arg	Lys			

340

345

<210> 5072
 <211> 243
 <212> PRT
 <213> S.epidermidis

<400> 5072

```

Ile Lys Arg Leu Lys Glu Gly Leu Leu Met Ile Asp Leu Trp Pro Ala
1      5      10      15
Ile Asp Leu Ile Asn Ser Thr Ser Val Arg Leu Thr Glu Gly Lys Tyr
      20      25      30
Asp Ser Lys Glu Lys Met Glu Lys Ser Val Glu Asp Ser Ile Arg Phe
      35      40      45
Tyr Ser Gln Phe Lys Cys Val Lys Arg Ile His Ile Val Asp Leu Ile
      50      55      60
Gly Ala Lys Ala Lys Glu Val Lys Glu Phe Asp Tyr Ile Arg Ser Leu
65      70      75      80
Arg Lys Leu Thr Thr Lys Pro Ile Glu Val Gly Gly Gly Ile Arg Ser
      85      90      95
Lys Gln Thr Ile Glu Asn Tyr Ile His Ser Gly Ile Asp Tyr Cys Ile
      100     105     110
Val Gly Thr Lys Gly Ile Gln Asp Ile Glu Trp Leu Thr His Met Thr
      115     120     125
His Gln Phe Pro Asn Lys Leu Tyr Leu Ser Val Asp Ala Phe Gly Glu
      130     135     140
Lys Ile Lys Ile Asn Gly Trp Lys Glu Asp Ala Lys Leu Asn Leu Phe
145     150     155     160
Asp Tyr Val Ala Lys Ile Glu His Leu Pro Leu Gly Gly Val Ile Tyr
      165     170     175
Thr Asp Ile Ser Lys Asp Gly Lys Leu Ser Gly Pro Asn Phe Asp Leu
      180     185     190
Thr Gly Arg Leu Ala Leu Tyr Thr Ser Leu Pro Val Ile Ala Ser Gly
      195     200     205
Gly Ile Arg His Gln Glu Asp Leu Phe Arg Leu Glu Ser Leu Asn Val
      210     215     220
His Ala Ala Ile Val Gly Lys Ala Ala His Leu Asp Glu Phe Trp Glu
225     230     235     240
Gly Leu Ser

```

<210> 5073
 <211> 45
 <212> PRT
 <213> S.epidermidis

<400> 5073

```

Asn Val Ser Val Cys Lys Tyr Ile Ser Leu His Ser Lys Ile Ile Gln
1      5      10      15
Arg Leu Trp Arg Arg Lys Ile Phe Lys Ile Lys Glu Asp Asp Lys Ser
      20      25      30
Tyr Leu Tyr Ala Gln Arg Met Val Glu Met Ile Asn Ser
      35      40      45

```

<210> 5074
 <211> 48

<212> PRT

<213> S.epidermidis

<400> 5074

Ser	Ser	Leu	Val	Leu	Cys	Ser	Lys	Cys	Asn	Lys	Asn	Tyr	Tyr	Ile	Thr
1				5					10					15	
Leu	Lys	Thr	Asp	Ile	His	Ile	Leu	Gln	Ser	Asn	Leu	Tyr	Leu	Arg	Gly
		20						25					30		
Phe	Tyr	Tyr	Glu	Ser	Ser	Ser	Met	Val	Trp	Thr	Lys	Gly	Cys	Thr	Arg
		35					40					45			

<210> 5075

<211> 48

<212> PRT

<213> S.epidermidis

<400> 5075

Phe	Val	Leu	Val	Arg	Ala	Ser	Leu	Val	Ala	Asn	Glu	Ser	Val	Ala	Phe
1				5					10					15	
Val	Ser	Ile	Asp	Trp	Val	Lys	Leu	Glu	Leu	Met	Phe	Phe	Ser	Glu	Asp
		20						25					30		
Asp	Val	Phe	Asp	Cys	Val	Asp	Leu	Glu	Val	Thr	Phe	Glu	Asp	Leu	Phe
		35					40					45			

<210> 5076

<211> 68

<212> PRT

<213> S.epidermidis

<400> 5076

Thr	Val	Ile	Val	Ser	Lys	Met	Ile	Glu	Arg	Lys	Ile	Ile	Leu	Asp	Pro
1				5					10					15	
Ser	Lys	Pro	Val	Asn	Arg	Ser	Ile	Pro	Ala	Glu	Ile	Ile	Gly	Thr	Pro
		20						25					30		
Arg	Ala	Ser	Asp	Val	Ala	Ala	Pro	Pro	Ser	Lys	Pro	Lys	Ile	Asn	Lys
		35					40					45			
Ile	Ser	Thr	Ile	Phe	Pro	His	Asn	Leu	Ser	Val	Cys	Pro	Phe	Lys	Ile
	50					55					60				
Gly	Arg	Gln	Ala												
65															

<210> 5077

<211> 47

<212> PRT

<213> S.epidermidis

<400> 5077

Met	Lys	Pro	Val	Asn	Asp	Asn	Gly	Ile	Arg	Leu	Ala	Pro	Ala	Glu	Asn
1				5					10					15	
Arg	Ile	Asn	Gly	Ile	Ala	Val	Ile	Ala	Pro	Glu	Asn	Ser	Ser	Gln	Asn
		20						25					30		
Asp	Asp	Ile	Phe	Asn	Pro	Asn	Val	Met	Cys	Cys	Cys	Cys	His	Arg	
		35					40					45			

<210> 5078

<211> 46

<213> S.epidermidis

Phe	Val	Ala	Val	Asp	Ser	Val	Asp	Ala	Asn	Val	Glu	Gly	Ile	Thr	Val
1				5					10					15	
Thr	Glu	Arg	Thr	Asp	Val	Thr	Ser	Ile	Glu	Leu	Lys	Val	Leu	Asn	Ile
			20					25						30	
Phe	Ile	Ser	Met	Ile	Thr	Pro	Tyr	Ile	Lys	Asp	Gly	Ile	Phe		
		35					40					45			

<213> S.epidermidis

Tyr	Asn	Lys	Val	Lys	Ala	Gln	Arg	Ala	Glu	Asn	His	Gln	Lys	Lys	Tyr
1				5					10					15	
Lys	Lys	Asp	Asn	Phe	Tyr	Ile	Ile	Ser	Ile	Glu	Ile	Val	Phe	Ile	Tyr
			20					25					30		
Leu	Ser	Trp	Asn	Phe	Leu	Ser	Gln	Pro	Leu	Phe					
		35					40								

<213> S.epidermidis

Lys 1	Asp	Lys	Val	Gly 5	Glu	Val	Glu	Met	Asn 10	Lys	Asn	Lys	Val	Ile 15	Val
Ile	Gly	Ser	Thr	Asn 20	Val	Asp	Lys	Phe 25	Leu	Asn	Val	Lys	Arg 30	Phe	Pro
Lys	Pro	Gly 35	Glu	Thr	Leu	His	Ile 40	Asn	Gln	Ala	Gln	Lys 45	Glu	Phe	Gly
Gly	Gly 50	Lys	Gly	Ala	Asn	Gln 55	Ala	Ile	Ala	Ala	Ser 60	Arg	Leu	Ala	Ala
Asp 65	Thr	Thr	Phe	Ile 70	Ser	Lys	Val	Gly	Lys	Asp 75	Gly	Asn	Ala	Asn	Phe 80
Ile	Leu	Glu	Asp	Phe 85	Lys	Lys	Ala	Gly	Ile 90	His	Thr	Gln	Tyr 95	Ile	Leu
Thr	Ser	Glu	Ser	Glu 100	Glu	Thr	Gly	Gln 105	Ala	Phe	Ile	Thr	Val 110	Asp	Glu
Ala	Gly	Gln 115	Asn	Thr	Ile	Leu	Val 120	Tyr	Gly	Gly	Ala 125	Asn	Met	Thr	Leu
Ser	Ala	Thr	Asp	Val	Glu	Met 135	Ser	Val	Asp	Ala	Phe 140	Ile	Gly	Ala	Asp
Phe 145	Val	Val	Ala	Gln 150	Leu	Glu	Val	Pro	Phe	Glu 155	Ala	Ile	Glu	Gln	Ala 160
Phe	Lys	Ile	Ala	Arg 165	Lys	Gln	Asn	Ile	Thr 170	Thr	Val	Leu	Asn	Pro	Ala
Pro	Ala	Ile	Glu 180	Leu	Pro	Lys	Ser	Leu 185	Leu	Glu	Leu	Thr 190	Asp	Ile	Ile
Ile	Pro	Asn 195	Glu	Thr	Glu	Ala	Glu 200	Leu	Leu	Thr	Gly 205	Ile	Ser	Ile	Asn


```

Asn Glu Ser Asp Met Lys Glu Thr Ala Thr Tyr Phe Leu Asp Leu Gly
 210          215          220
Ile Ser Ala Val Leu Ile Thr Leu Gly Glu Gln Gly Thr Tyr Cys Ala
225          230          235          240
Tyr Gln Glu Gln Tyr Lys Met Ile Pro Ala Cys Asn Val Lys Ala Ile
          245          250          255
Asp Thr Thr Ala Ala Gly Asp Thr Phe Ile Gly Ala Phe Leu Ser Glu
          260          265          270
Leu Asn Lys Asp Leu Ser Asn Leu Glu Ser Ala Ile Arg Leu Ala Asn
          275          280          285
Gln Ala Ser Ser Leu Thr Val Gln Arg Lys Gly Ala Gln Ala Ser Ile
          290          295          300
Pro Thr Arg Lys Glu Val Glu Ala Glu Tyr Asn
305          310          315

```

<210> 5081

<211> 1186

<212> PRT

<213> S.epidermidis

<400> 5081

```

Glu Val Lys Val Ser Asp Val Leu Ile Asp Val Asp Val Leu Asp Glu
1          5          10          15
Ser Glu Met Leu Val Leu Asp Asp Ser Leu Thr Asp Val Leu Ser Leu
          20          25          30
Val Asp Ser Leu Ser Leu Val Asp Val Asp Ala Leu Ser Asp Val Asp
          35          40          45
Val Leu Val Glu Ser Glu Thr Leu Val Leu Asp Asp Ser Leu Thr Asp
          50          55          60
Val Leu Ser Leu Ser Asp Ser Leu Thr Leu Val Asp Val Asp Ala Leu
          65          70          75          80
Ser Asp Val Asp Val Asp Ala Leu Ser Asp Val Asp Val Leu Val Glu
          85          90          95
Ser Glu Met Leu Val Leu Val Glu Pro Leu Asn Asp Val Leu Ala Leu
          100          105          110
Ser Glu Ser Leu Ser Leu Val Asp Val Asp Ala Leu Ala Asp Val Asp
          115          120          125
Val Leu Val Glu Ser Glu Thr Leu Val Leu Val Glu Pro Leu Asn Asp
          130          135          140
Val Leu Ala Leu Leu Glu Ser Leu Thr Leu Val Asp Val Asp Ala Leu
          145          150          155          160
Ala Asp Val Asp Ala Leu Val Glu Ser Glu Thr Leu Val Leu Val Asp
          165          170          175
Ser Leu Asn Asp Val Leu Ser Leu Phe Glu Ser Leu Ser Leu Val Asp
          180          185          190
Val Asp Ala Leu Ser Asp Val Asp Val Leu Val Glu Ser Glu Thr Leu
          195          200          205
Val Leu Val Asp Ser Leu Asn Asp Val Leu Ala Leu Val Asp Ser Leu
          210          215          220
Ser Leu Val Asp Val Asp Ala Leu Ser Asp Val Asp Ala Leu Val Glu
          225          230          235          240
Ser Glu Thr Leu Val Leu Val Glu Ser Leu Lys Asp Val Leu Ala Leu
          245          250          255
Phe Glu Ser Leu Thr Leu Ile Asp Val Asp Ala Leu Ser Asp Val Asp
          260          265          270
Val Leu Val Glu Ser Glu Met Leu Val Leu Val Asp Ser Leu Lys Asp

```

		275					280					285				
Val	Leu	Ala	Leu	Ser	Glu	Ser	Leu	Ser	Leu	Val	Asp	Val	Asp	Pro	Leu	
	290					295					300					
Ser	Asp	Val	Asp	Val	Leu	Val	Glu	Ser	Glu	Arg	Leu	Val	Leu	Leu	Glu	
305					310					315					320	
Ser	Leu	Asn	Asp	Val	Leu	Val	Leu	Phe	Glu	Ala	Leu	Thr	Leu	Val	Asp	
				325					330					335		
Val	Asp	Val	Leu	Val	Asp	Ser	Glu	Thr	Leu	Val	Leu	Val	Glu	Ser	Leu	
			340					345					350			
Asn	Asp	Val	Leu	Ala	Leu	Ser	Glu	Ser	Leu	Ser	Leu	Val	Asp	Val	Asp	
		355					360					365				
Ala	Leu	Ser	Asp	Val	Asp	Ile	Leu	Val	Glu	Ser	Glu	Arg	Leu	Val	Leu	
		370				375					380					
Val	Asp	Ser	Leu	Asn	Asp	Val	Leu	Ala	Leu	Phe	Glu	Ser	Leu	Thr	Leu	
385					390					395					400	
Val	Asp	Val	Asp	Ala	Leu	Ser	Asp	Val	Asp	Ala	Leu	Val	Glu	Ser	Glu	
				405					410					415		
Thr	Leu	Val	Leu	Thr	Asp	Ser	Leu	Asp	Asp	Val	Leu	Ala	Leu	Ser	Glu	
			420					425					430			
Ser	Leu	Ser	Leu	Val	Asp	Ala	Asp	Ala	Leu	Ser	Asp	Val	Asp	Val	Leu	
		435					440					445				
Val	Glu	Ser	Glu	Thr	Leu	Val	Leu	Val	Glu	Pro	Leu	Asn	Asp	Val	Leu	
		450				455					460					
Val	Leu	Phe	Asp	Ser	Leu	Thr	Leu	Val	Asp	Val	Asp	Ala	Leu	Ser	Asp	
465					470					475					480	
Val	Asp	Val	Leu	Val	Asp	Ser	Glu	Ser	Leu	Val	Leu	Thr	Asp	Ser	Leu	
				485					490					495		
Asp	Asp	Val	Leu	Ala	Leu	Ser	Glu	Ser	Leu	Thr	Leu	Val	Asp	Val	Asp	
			500					505					510			
Ala	Leu	Ser	Asp	Val	Asp	Val	Leu	Val	Glu	Ser	Glu	Thr	Leu	Val	Leu	
		515					520					525				
Asn	Asp	Ser	Leu	Met	Asp	Val	Leu	Val	Leu	Phe	Asp	Ser	Leu	Thr	Leu	
		530				535					540					
Val	Asp	Val	Asp	Ala	Leu	Ser	Asp	Val	Asp	Val	Leu	Val	Glu	Ser	Glu	
545					550					555					560	
Met	Leu	Val	Leu	Val	Glu	Pro	Leu	Asn	Asp	Val	Leu	Ala	Leu	Ser	Glu	
				565					570					575		
Ser	Leu	Ser	Leu	Val	Asp	Ala	Asp	Ala	Leu	Ser	Asp	Val	Asp	Val	Leu	
			580					585					590			
Val	Glu	Ser	Glu	Thr	Leu	Val	Leu	Asn	Glu	Pro	Leu	Asn	Asp	Val	Leu	
		595					600					605				
Ala	Leu	Phe	Glu	Ser	Leu	Thr	Leu	Val	Asp	Val	Asp	Ala	Leu	Ser	Asp	

725						730						735			
Val	Glu	Ser	Glu	Thr	Leu	Val	Leu	Asn	Asp	Ser	Leu	Met	Asp	Val	Leu
			740				745						750		
Ala	Leu	Ser	Glu	Ser	Leu	Thr	Leu	Val	Asp	Val	Asp	Ala	Leu	Ser	Asp
			755				760						765		
Val	Asp	Ala	Leu	Val	Glu	Ser	Glu	Thr	Leu	Val	Leu	Val	Asp	Ser	Leu
			770				775						780		
Asn	Asp	Val	Leu	Ser	Leu	Val	Glu	Ser	Leu	Ser	Leu	Val	Asp	Val	Asp
785						790						800			
Ala	Leu	Ser	Asp	Val	Asp	Val	Leu	Val	Glu	Ser	Glu	Arg	Leu	Val	Leu
			805						810			815			
Val	Asp	Ser	Leu	Asn	Asp	Val	Leu	Val	Leu	Ser	Asp	Ser	Leu	Ser	Leu
			820						825			830			
Val	Asp	Val	Asp	Ala	Leu	Ser	Asp	Val	Asp	Val	Leu	Val	Glu	Ser	Glu
			835						840			845			
Met	Leu	Val	Leu	Asn	Asp	Pro	Leu	Asn	Asp	Val	Leu	Ala	Leu	Phe	Asp
850						855						860			
Ser	Leu	Ser	Leu	Val	Asp	Val	Asp	Ala	Leu	Ser	Asp	Val	Asp	Ala	Leu
865						870						880			
Val	Glu	Ser	Glu	Thr	Leu	Val	Leu	Asn	Asp	Ser	Leu	Asn	Asp	Val	Leu
			885						890			895			
Ser	Leu	Val	Glu	Ser	Leu	Ser	Leu	Val	Asp	Val	Asp	Ala	Leu	Ser	Asp
			900						905			910			
Val	Asp	Ala	Leu	Val	Glu	Pro	Glu	Arg	Leu	Val	Leu	Val	Asp	Ser	Leu
			915						920			925			
Asn	Asp	Val	Leu	Val	Leu	Ser	Asp	Ser	Leu	Ser	Leu	Val	Asp	Val	Asp
			930						935			940			
Ala	Leu	Ser	Asp	Val	Asp	Ala	Leu	Val	Glu	Pro	Glu	Arg	Leu	Val	Leu
945						950						960			
Val	Asp	Ser	Leu	Asn	Asp	Val	Leu	Leu	Leu	Phe	Asp	Ser	Leu	Ser	Leu
			965						970			975			
Ala	Asp	Ile	Asp	Ala	Leu	Ser	Asp	Val	Asp	Val	Leu	Val	Glu	Ser	Glu
			980						985			990			
Thr	Leu	Val	Leu	Val	Asp	Ser	Leu	Asn	Asp	Val	Leu	Ala	Leu	Ser	Asp
			995						1000			1005			
Ser	Leu	Ser	Leu	Val	Asp	Val	Asp	Ala	Leu	Ser	Asp	Val	Asp	Val	Leu
1010						1015						1020			
Val	Glu	Ser	Glu	Thr	Leu	Val	Leu	Val	Asp	Leu	Leu	Asn	Asp	Val	Leu
1025						1030						1040			
Ala	Leu	Leu	Glu	Ser	Leu	Thr	Leu	Val	Asp	Val	Asp	Ala	Leu	Ser	Asp
			1045						1050			1055			
Val	Asp	Val	Leu	Thr	Asp	Ser	Asp	Asn	Ser	Leu	Leu	Val	Leu	Ala	Asp
			1060						1065			1070			
Ser	Leu	Ala	Phe	Ile	Asp	Ala	Leu	Ser	Asp	Val	Asp	Val	Leu	Val	Glu
			1075						1080			1085			
Ser	Glu	Met	Leu	Val	Leu	Val	Glu	Pro	Leu	Thr	Leu	Val	Asp	Val	Asp
1090						1095						1100			
Ala	Leu	Ser	Asp	Val	Asp	Thr	Leu	Ala	Glu	Ser	Glu	Thr	Leu	Val	Leu
1105						1110						1120			
Val	Asp	Ser	Leu	Asn	Asp	Val	Leu	Leu	Leu	Val	Asp	Ser	Leu	Phe	Leu
			1125						1130			1135			
Ala	Asp	Ser	Asp	Al											

1170
Asn Asp
1185

1175

1180

<210> 5082
<211> 447
<212> PRT
<213> S.epidermidis

<400> 5082

Asn	Ile	Glu	Val	Lys	Ile	Val	Arg	His	Lys	Leu	Gly	Asp	Ser	Ser	Met
1				5					10					15	
Leu	Leu	Phe	Ile	Ile	Glu	Ile	Ile	Ile	Met	Ile	Leu	Ala	Ile	Leu	Leu
			20					25					30		
Gly	Leu	Arg	Thr	Ala	Gly	Ala	Leu	Gly	Cys	Gly	Ile	Phe	Ala	Ile	Val
		35					40					45			
Ala	Gln	Leu	Ile	Met	Ile	Phe	Gly	Phe	Gln	Leu	Pro	Pro	Gly	Ser	Ala
	50					55					60				
Pro	Val	Thr	Ala	Val	Leu	Ile	Ile	Leu	Ser	Ile	Gly	Ile	Ala	Gly	Gly
65					70					75				80	
Thr	Leu	Gln	Ala	Thr	Gly	Gly	Ile	Asp	Tyr	Leu	Val	Tyr	Ile	Ala	Ser
				85					90					95	
Arg	Val	Ile	Glu	Arg	Phe	Pro	Lys	Ser	Ile	Ile	Phe	Ile	Ala	Pro	Met
			100					105					110		
Ile	Val	Phe	Val	Phe	Val	Phe	Gly	Ile	Gly	Thr	Ala	Asn	Ile	Ala	Leu
		115					120					125			
Ser	Leu	Glu	Pro	Ile	Ile	Ala	Lys	Thr	Ala	Gln	Lys	Ala	Arg	Ile	Gln
	130					135					140				
Pro	Lys	Arg	Ala	Leu	Thr	Ala	Ser	Val	Leu	Thr	Ala	Asn	Leu	Ala	Leu
145					150					155					160
Leu	Cys	Ser	Pro	Ala	Ala	Ser	Ala	Thr	Ala	Tyr	Ile	Ile	Ser	Val	Leu
				165					170					175	
Ala	Gly	Tyr	Glu	Ile	Ser	Met	Gly	Lys	Tyr	Leu	Ser	Ile	Val	Leu	Pro
			180					185					190		
Thr	Ala	Leu	Ile	Ser	Met	Leu	Met	Leu	Ser	Thr	Phe	Cys	Thr	Phe	Val
		195					200					205			
Gly	Arg	Lys	Glu	His	Val	Arg	Asp	Glu	Ser	Glu	Arg	Leu	Val	Gln	Met
	210					215					220				
Pro	Glu	Val	Glu	Ile	Lys	Asn	Asp	Phe	Ser	Leu	Lys	Val	Lys	Ile	Gly
225					230					235				240	
Val	Ile	Ser	Phe	Leu	Leu	Cys	Val	Met	Gly	Ile	Leu	Thr	Phe	Gly	Ile
				245					250					255	
Phe	Pro	Asn	Leu	Met	Pro	Gln	Phe	Asn	Val	Asn	Gly	Asp	Val	Val	Lys
			260					265					270		
Val	Glu	Met	Thr	Glu	Ile	Val	Gln	Phe	Phe	Met	Tyr	Leu	Ser	Ala	Thr
		275					280					285			
Ile	Asn	Leu	Leu	Leu	Ile	Lys	Ile	Asn	Thr	Ser	Asp	Ile	Leu	Ser	Ser
	290					295					300				
Asn	Ile	Thr	Gln	Ser	Ala	Met	Gly	Ala	Leu	Phe	Ala	Val	Leu	Gly	Pro
305					310					315				320	
Gly	Trp	Leu	Gly	Ala	Thr	Ile	Phe	Asn	Ala	Pro	His	Asn	Leu	Lys	Ile
				325					330					335	
Leu	Lys	Asn	Asp	Ile	Gly	Ser	Ile	Ile	Ser	Glu	Val	Pro	Trp	Leu	Val
			340					345					350		
Ile	Ile	Leu	Val	Ser	Val	Val	Ala	Met	Ile	Val	Ile	Ser	Gln	Thr	Ala
		355					360					365			

Thr Ala Ser Ile Met Val Pro Ile Val Met Ser Leu Gly Ile Pro Pro
 370 375 380
 Ile Tyr Phe Val Ala Met Val Gln Thr Leu Asn Val Asn Phe Val Ile
 385 390 395 400
 Pro Ala Gln Pro Thr Leu Leu Phe Ala Val Glu Leu Asp Glu Thr Gly
 405 410 415
 Arg Thr Arg Pro Thr Ser Phe Met Ile Pro Gly Phe Phe Val Ile Thr
 420 425 430
 Val Ser Val Ile Thr Gly Phe Val Ile Lys Thr Ile Leu Gly Tyr
 435 440 445

<210> 5083
 <211> 41
 <212> PRT
 <213> S.epidermidis

<400> 5083
 Ala Ile Arg Val Arg Asn Ile Lys Phe Tyr Ser Thr Phe Val Leu Leu
 1 5 10 15
 Leu Leu Phe Ile His Asn Asn Leu Phe Tyr Thr Leu Phe Gln Glu Phe
 20 25 30
 Ile Glu Ile Asp Asn Ser His Ile Leu
 35 40

<210> 5084
 <211> 280
 <212> PRT
 <213> S.epidermidis

<400> 5084
 Val Ser Phe Leu Arg Phe Glu Gln Ser Arg Leu Tyr Lys His Arg Glu
 1 5 10 15
 Asp Asp Thr Met Phe Ile Ser Lys Gln Glu Leu Tyr Glu Lys Leu Gln
 20 25 30
 Tyr Val Thr Pro Arg Thr Phe Ala Tyr Leu Asn Glu Ile Asp Tyr Tyr
 35 40 45
 Asn Leu Leu Met Ile Ile Glu Glu His Gln Ile Ser Ile Pro Pro Ile
 50 55 60
 His Gln Leu Arg Lys Thr Leu Arg Gly Ser Lys Ile Met Lys Pro Lys
 65 70 75 80
 Asn Arg Val Asp Asn Cys Tyr Ile His Leu Lys Asp Glu Ile Pro Thr
 85 90 95
 Pro Ile Asn Asn Glu Gln Leu Ser Phe Leu His Phe Tyr Pro Arg Gln
 100 105 110
 Gln Ile His Leu Ile Leu Ser Ala Tyr Ser Arg Met Lys Ser Leu Lys
 115 120 125
 Leu Gln Ser Gln Lys His Cys Leu Lys Leu Lys Phe Pro Leu Asp Gln
 130 135 140
 His Ser Ile Arg Lys Glu Ile Thr Pro Pro Gln Ser Ser Asp Lys Asp
 145 150 155 160
 Asn Asp Ile Leu Ile Cys Leu Leu Gln Lys Leu Ile Asn Glu Ile Thr
 165 170 175
 Lys Cys Gln Val Pro Val Ser Leu Lys Asn Asn Ser Phe Glu Ile Lys
 180 185 190
 Leu Pro Asn Tyr Ile Ile Lys Val Asp Leu Asn Tyr His Glu Gln Gln
 195 200 205

Asp His Leu Tyr Pro Leu Gln Tyr Ser Ile His Ala Trp His Arg Asp
 210 215 220
 Phe Gln Tyr Leu Glu Ile Ser Asn Thr Phe Thr Ile Pro Ser Leu Asn
 225 230 235 240
 Asp Leu Ile Phe His Ile Gln Lys Leu Phe Leu Leu Ile Phe Gln Leu
 245 250 255
 Pro Glu His Leu Ala Arg Gln Glu Tyr Ser Leu Ser Gln Tyr Tyr Phe
 260 265 270
 Tyr Ser Gln Cys His Thr Lys Asn
 275 280

<210> 5085

<211> 249

<212> PRT

<213> S.epidermidis

<400> 5085

Leu Lys Leu Val Arg Asn Gly Leu Val Lys Met Phe Leu Asn Leu Asn
 1 5 10 15
 Asn Glu Gln Gln His Ala Leu Asp Ala Ala Lys Gln Ala Phe Gly Pro
 20 25 30
 Met Leu Glu Gly Leu Val Lys Tyr Ser Ile Pro Ile Thr Leu Val Thr
 35 40 45
 Phe Ile Leu Gly Leu Ile Ile Ala Leu Phe Thr Ala Leu Met Arg Ile
 50 55 60
 Ser Thr Ser Lys Leu Leu Arg Gly Ile Ala Arg Val Tyr Val Ser Ile
 65 70 75 80
 Ile Arg Gly Thr Pro Met Ile Val Gln Leu Phe Ile Ile Phe Tyr Gly
 85 90 95
 Ile Pro Glu Leu Gly Arg Leu Val Thr Asn Asn Ala Asp Asn Gln Trp
 100 105 110
 Thr Leu Ala Pro Val Ile Ala Ala Val Ile Gly Leu Ser Leu Asn Val
 115 120 125
 Gly Ala Tyr Ala Ser Glu Ile Ile Arg Gly Gly Ile Leu Ser Ile Pro
 130 135 140
 Lys Gly Gln Thr Glu Ala Ala Tyr Ser Ile Gly Met Asn Tyr Arg Gln
 145 150 155 160
 Thr Val Gln Arg Ile Ile Leu Pro Gln Ala Ile Arg Val Ser Ile Pro
 165 170 175
 Ala Leu Gly Asn Thr Phe Leu Ser Leu Ile Lys Asp Thr Ser Leu Leu
 180 185 190
 Gly Phe Ile Leu Val Ala Glu Met Phe Arg Lys Ala Gln Glu Val Ala
 195 200 205
 Ser Thr Thr Tyr Glu Tyr Leu Thr Ile Tyr Leu Leu Val Ala Leu Met
 210 215 220
 Tyr Trp Val Val Cys Phe Ile Ile Ser Ile Ile Gln Gly Trp Tyr Glu
 225 230 235 240
 Ser Arg Ile Glu Arg Gly Tyr Arg Ser
 245

<210> 5086

<211> 62

<212> PRT

<213> S.epidermidis

<400> 5086

Leu Arg Lys Val Leu Ile Ser Leu Asn Phe Lys Val Phe Leu Ile Ile
 1 5 10 15
 Ile Phe His Asp Phe Leu Ile Tyr Tyr Glu His Gly Phe Met Tyr Ser
 20 25 30
 Arg Phe Lys Glu His Ala Glu Gln Ser Ser His Leu Phe Ile Leu Lys
 35 40 45
 Ser His Leu Lys Pro Phe Pro Pro Phe Arg Tyr Thr Tyr Asp
 50 55 60

<210> 5087

<211> 136

<212> PRT

<213> S.epidermidis

<400> 5087

Ser Val Lys Val Met Lys Leu Lys Lys Glu Ile Asn Val Val Gly Ala
 1 5 10 15
 Ile Ile Tyr Ser Asp Asn Lys Ile Leu Cys Ala Gln Arg Ser Glu Asn
 20 25 30
 Met Ser Leu Pro Leu Lys Trp Glu Phe Pro Gly Gly Lys Ile Glu Asn
 35 40 45
 Gly Glu Thr Glu Lys Asp Ala Leu Ile Arg Glu Ile Lys Glu Glu Met
 50 55 60
 Lys Cys Asp Leu Ile Val Gly Asp Lys Val Thr Thr Thr Thr Tyr Glu
 65 70 75 80
 Tyr Asp Phe Gly Ile Val Asn Leu Thr Thr Tyr Lys Cys Glu Leu Asn
 85 90 95
 Asn Lys Lys Pro Thr Leu Thr Glu His Lys Glu Ile Lys Trp Val Gly
 100 105 110
 Lys Asn Glu Leu Asp Lys Leu Asp Trp Ala Pro Ala Asp Val Pro Ala
 115 120 125
 Val Arg Arg Ile Ile Glu Glu Asn
 130 135

<210> 5088

<211> 69

<212> PRT

<213> S.epidermidis

<400> 5088

Ile Ile Glu Val Met Thr Met Arg Asn Ala Ile Glu Glu Leu Ile Phe
 1 5 10 15
 Ser Asp Val Ser Ser Tyr Asp Ile Tyr Val Asn Thr Gly Val Asn Gln
 20 25 30
 Gly Leu Val Gly Asp Ile Lys Asp Gly Tyr Leu Thr Ile Asp Ser Ile
 35 40 45
 Pro Tyr Ile Asp Ala Glu Arg Leu Tyr Tyr Tyr Ser Leu Glu Arg Lys
 50 55 60
 Ala Leu Val Thr Ser
 65

<210> 5089

<211> 114

<212> PRT

<213> S.epidermidis

<400> 5089

Val Lys Glu Val Gly Val Met Phe Ile Gln Phe Lys Arg Leu Leu Ile
 1 5 10 15
 Gly Arg Pro Lys Arg Asn Arg Asp Leu Lys Asn Glu Lys Ile Ser Lys
 20 25 30
 Phe Lys Gly Leu Ala Ile Leu Ser Ser Asp Ala Leu Ser Ser Val Ala
 35 40 45
 Tyr Gly Pro Glu Gln Ile Leu Ile Thr Leu Ser Val Ile Gly Ala Val
 50 55 60
 Ala Ser Trp Tyr Thr Leu Pro Ile Ala Gly Ala Val Leu Ile Leu Leu
 65 70 75 80
 Thr Ala Leu Ile Leu Ser Tyr Arg Gln Ile Tyr Ala Tyr Pro Lys
 85 90 95
 Gly Gly Glu Arg Ile Leu Phe Leu Lys Gln Ile Leu Val Arg Asn Gly
 100 105 110
 Asp Cys

<210> 5090

<211> 573

<212> PRT

<213> S.epidermidis

<400> 5090

Thr Leu Glu Val Glu Asn Met Lys Ser Ala Gln Ala Leu Lys Gln Asn
 1 5 10 15
 Leu Thr Ser Leu Asp Gly Gln Lys Tyr Gly Ala Tyr Lys Gln Ile Lys
 20 25 30
 Asp Leu Tyr Glu Phe Asn Leu Phe Lys Leu Arg Ile Asn His Ile Gln
 35 40 45
 Ala Asp Pro Phe Ala Pro Pro Ser Lys Met Ser Val Val Ile Asp Arg
 50 55 60
 Gln Gln Ala Lys Phe Pro Asp Ser Leu Leu Asn Ser Glu Leu Lys Gln
 65 70 75 80
 Arg Ala Val Ser Asp Tyr Leu Thr Arg Val Phe His Lys Gln Ile Gln
 85 90 95
 Ser Ile Val Ala Gln Asp Lys Lys Val Ser Lys Ile Gln Ile Asp Ser
 100 105 110
 Cys Gly Gln Glu Ile Leu Glu Arg Thr Ala Ile Val Ile Lys Asn His
 115 120 125
 Gln Ile Glu Ala Arg Ile Glu Val Gly Leu Pro Ala Arg Gly Arg Thr
 130 135 140
 Ile Leu Gly Arg Ile Ala Arg His Thr Leu Ile Asn Val Leu Pro Gln
 145 150 155 160
 Ile Val Glu His Ala Leu Cys Tyr Arg Asn Ile Asn Gly Ser Gln Leu
 165 170 175
 Gln Gln Gln Val Glu Leu Met Met Asp Gln Glu Glu Ile Arg Gln Gln
 180 185 190
 Leu Val Lys Arg Asp Leu Val Ala Phe Val Ala Asn Gly Ala Ile Leu
 195 200 205
 Pro Arg Lys Ser Gly Val Ser Asp Leu Pro Met Asn Asn Ala Ile Glu
 210 215 220
 Phe Lys Ser Pro Lys Gln Tyr Glu Ile Val Met Lys Leu Ser Ser Gly
 225 230 235 240
 Lys Val Ile Lys Gly Met Gly Ile Pro Lys Gly Ile Thr Leu Ile Val
 245 250 255


```
<210> 5092
<211> 154
<212> PRT
<213> S.epidermidis
```

Val	Ala	Arg	Val	Gly	Tyr	His	Leu	Thr	Trp	Lys	Met	Ile	Leu	Gly	Leu
1				5					10					15	
Phe	Pro	Lys	Glu	Asp	Lys	Val	Lys	Ala	Leu	Asp	Ala	Leu	Glu	Arg	Val
			20					25					30		
Asn	Ile	Leu	Asp	Lys	Tyr	Asp	Gln	Arg	Ser	Asp	Gln	Leu	Ser	Gly	Gly
		35					40					45			
Gln	Gln	Gln	Arg	Ile	Ser	Ile	Ala	Arg	Ala	Leu	Cys	Gln	Glu	Pro	Thr
	50					55					60				
Ile	Ile	Leu	Ala	Asp	Glu	Pro	Val	Ala	Ser	Leu	Asp	Pro	Leu	Thr	Thr
65				70						75				80	
Lys	Gln	Val	Met	Asp	Asp	Leu	Lys	Lys	Ile	Asn	Glu	Glu	Leu	Gly	Ile
			85						90					95	
Thr	Ile	Leu	Ile	Asn	Leu	His	Phe	Val	Asp	Leu	Ala	Lys	Glu	Tyr	Gly
			100					105					110		
Ser	Arg	Ile	Ile	Gly	Leu	Arg	Ala	Gly	Glu	Leu	Val	Tyr	Asp	Gly	Pro
		115					120					125			

Ala Ser Glu Thr Asn Asp Glu Val Phe Asn His Ile Tyr Gly Arg Ser
 130 135 140
 Ile Lys Asn Asp Glu Lys Leu Gly Val Glu
 145 150

<210> 5093
 <211> 48
 <212> PRT
 <213> S.epidermidis

<400> 5093
 Phe Ser Leu Leu Val Phe Ile Lys Leu Tyr Glu Arg Ala Tyr Phe Phe
 1 5 10 15
 Lys Tyr Phe Gly Glu Thr Leu Glu Gly Thr Gly Gln Ala Glu Asp Tyr
 20 25 30
 Arg Leu Lys Leu Ser Pro Lys Lys Ala Ser Gln Gln Tyr Glu Val Leu
 35 40 45

<210> 5094
 <211> 474
 <212> PRT
 <213> S.epidermidis

<400> 5094
 Asn Phe Leu Phe Leu Met Gln Met Lys Leu Gly Trp His Asn Val Leu
 1 5 10 15
 Leu Val Lys Gly Gly Ile Tyr Tyr Met Ser Lys Ser Tyr Asp Leu Ile
 20 25 30
 Val Ile Gly Ala Gly Pro Gly Gly Tyr Val Ala Ala Ile Arg Gly Ala
 35 40 45
 Gln Leu Gly Lys Asn Val Ala Val Ile Glu Lys Asn Asn Ala Gly Gly
 50 55 60
 Thr Cys Leu Asn Val Gly Cys Ile Pro Ser Lys Thr Leu Leu Glu His
 65 70 75 80
 Gly Glu Lys Ala His Ser Ile Arg Val Ala Asn Asp Trp Gly Ile Thr
 85 90 95
 Thr Lys Asp Leu Lys Ile Asp Phe Thr Gln Phe Val Gln Arg Lys Lys
 100 105 110
 Lys Val Val Gln Thr Leu Thr Gly Gly Val Lys Gln Leu Leu Lys Lys
 115 120 125
 Asn Lys Val Thr Tyr Ile Glu Gly Glu Ala Arg Ile Ser Lys Asn Leu
 130 135 140
 Lys Val Asp Val Asn Asn Glu Thr Tyr Gln Ala Lys Asp Ile Ile Leu
 145 150 155 160
 Ala Thr Gly Ser Gln Pro Phe Ile Pro Pro Ile Asp Gly Leu Asp Gln
 165 170 175
 Val Asn Tyr Glu Thr Thr Asp Thr Phe Asp Leu Glu Lys Leu Pro
 180 185 190
 Lys Gln Leu Ala Val Ile Gly Gly Val Ile Ala Thr Glu Leu Ala
 195 200 205
 Ser Ser Met Ala Asp Leu Gly Val Arg Val Thr Ile Ile Glu Val Ala
 210 215 220
 Asp Asp Ile Leu Leu Thr Glu Ile Asn Glu Thr Arg Glu Met Leu Lys
 225 230 235 240
 Ala His Leu Asp Asn Gln Gly Ile Lys Ile Leu Thr Lys Ala Lys Ile
 245 250 255

Lys Gln Val Lys Glu Ser Lys Ile Ile Leu Asp Gly Gln Asp Asp Val
 260 265 270
 Ser Phe Asp Thr Leu Leu Val Ala Thr Gly Arg Gln Pro Asn Thr Gln
 275 280 285
 Val Ala Lys Asp Leu Asn Leu Glu Met Asp Gly Lys Phe Phe Lys Val
 290 295 300
 Asn Glu His Tyr Glu Thr Ser Gln Lys His Val Tyr Ala Ile Gly Asp
 305 310 315 320
 Leu Ile Lys Gly Tyr Gln Leu Ala His Ala Ala Ser Ala His Gly Ile
 325 330 335
 His Val Val Glu Thr Ile Met Asn Lys Gln Pro Ser Leu Val Arg Gln
 340 345 350
 Glu Asp Ile Thr Arg Cys Ile Tyr Thr Arg Leu Glu Ala Ala Ser Val
 355 360 365
 Gly Leu Ser Glu Glu Gln Ala Lys Glu Ala Gly Tyr Asp Val Lys Val
 370 375 380
 Thr Gln Ser Ala Phe Gln Gly Asn Ala Lys Ala Leu Ile Lys Gly Glu
 385 390 395 400
 Asn Glu Gly Phe Ile Lys Leu Val Val Asp Lys Lys Tyr Gly Glu Val
 405 410 415
 Leu Gly Ala Phe Ile Val Gly Pro His Ala Thr Asp Ile Ile Gly Glu
 420 425 430
 Leu Leu Ser Val Lys Ala Ser Glu Gly Thr Ile His Glu Leu Ser Gln
 435 440 445
 Ile Ile Gln Pro His Pro Ala Leu Leu Glu Ala Ile Gly Glu Ser Ala
 450 455 460
 Asp Ala Phe Phe Asp Ser Ala Ile His Met
 465 470

<210> 5095

<211> 160

<212> PRT

<213> S.epidermidis

<400> 5095

Ile Leu Leu Leu Leu Leu Ser Leu Asn Lys Tyr Ile Phe Trp Glu Lys
 1 5 10 15
 Glu Met Lys Phe Lys Lys Leu Leu Ser Arg Ile Ile Ile Ala Thr Met
 20 25 30
 Ile Thr Phe Thr Gly Thr Leu Ser Tyr Gln Ala Ile Glu Gln Thr His
 35 40 45
 Ile Ser His Ala Ala His Asn Tyr Tyr Gly Lys Lys Gln Cys Thr Trp
 50 55 60
 Trp Ala Phe Lys Arg Arg Ala Gln Leu Gly Lys Pro Val Ser Asn Arg
 65 70 75 80
 Trp Gly Asn Ala Lys Asn Trp Tyr Ser Asn Ala Arg Arg Ser Gly Tyr
 85 90 95
 Ala Thr Gly His Lys Pro Arg Lys Tyr Ala Val Met Gln Ser Thr Arg
 100 105 110
 Gly Tyr Tyr Gly His Val Ala Val Glu Lys Val Tyr Lys Asn Gly
 115 120 125
 Lys Ile Lys Ile Ser Glu Tyr Asn Tyr Asn Val Pro Leu Gly Tyr Gly
 130 135 140
 Thr Arg Ile Ile Ser Lys Ser Ser Ala Arg Asn Tyr Asn Tyr Ile Tyr
 145 150 155 160

Tyr Ile Ala His Ile Glu Ser Leu Phe Asn His Glu Lys Ser Ile His
 405 410 415
 Val Arg Arg

<210> 5097
 <211> 74
 <212> PRT
 <213> S.epidermidis

<400> 5097
 Gly Glu Ile Leu Ser Phe Tyr Glu Phe Met Gln Asn Phe Leu Gly Asp
 1 5 10 15
 Asp Thr Pro Leu Gly Glu Leu Val Asp Trp Ile Asn Gln Asp Ile Asn
 20 25 30
 Phe Pro Lys Asp Val Thr Ser Gln Lys Glu Ile Leu Thr Tyr Phe Arg
 35 40 45
 Asn His Pro Cys Pro Glu Asn Ile Pro Val Thr Ser Ile Lys Arg Ala
 50 55 60
 Leu Ala Val Phe Asn Gln Phe Thr Lys Val
 65 70

<210> 5098
 <211> 45
 <212> PRT
 <213> S.epidermidis

<400> 5098
 Gln Tyr Val Leu Lys Asn His Leu His Val Asp Lys Met Asn Trp Leu
 1 5 10 15
 Ile Leu Ile Ile Asn Ile Ile Ala Gln Lys Ile Asn Ile Leu Ser Lys
 20 25 30
 Asn Ser Glu Lys Leu Thr Lys Ile Ile Phe Leu Ser Asp
 35 40 45

<210> 5099
 <211> 122
 <212> PRT
 <213> S.epidermidis

<400> 5099
 Glu Glu Ser Leu Met Val Leu Arg Tyr Ala Thr Asn Leu Lys Leu Ala
 1 5 10 15
 Lys Glu Leu Tyr Asp Ala Ser Lys Pro Lys Leu Lys Gly Asp Gln Gly
 20 25 30
 Met Ile Asp Thr Phe Thr Asn Thr Phe Gly Leu Pro Glu Asn Ser Val
 35 40 45
 Lys Leu Ala Gly Gly Val Glu Ala Ala Ala Ala Gly Leu Phe Ala Ala
 50 55 60
 Ser Phe Leu Asn Lys Asn Ile Ser Arg Leu Gly Ser Leu Ala Ala Ile
 65 70 75 80
 Ser Val Leu Gly Val Ala Ala Tyr Lys His Phe Glu Ala Gly His Gly
 85 90 95
 Lys Lys Gly Ala Gln His Ala Leu Asp Leu Leu Gly Leu Ser Thr Leu
 100 105 110
 Ser Leu Leu Asp Thr Phe Ser Cys Lys Lys

<213> S.epidermidis

<400> 5103

Phe	Val	Thr	Phe	Asn	His	Arg	Ile	Leu	Leu	Thr	Glu	Leu	Gly	Leu	Ser
1				5				10						15	
Ser	Arg	Thr	Val	Leu	Gln	Thr	Ser	Ile	Asn	Val	Gly	Ile	Trp	Cys	Val
			20				25					30			
Val	Cys	Met	Tyr	Asn	Trp	Asn	Ser	Tyr	Trp	Tyr	Phe	His	Ser	Gln	Val
		35					40					45			

<210> 5104

<211> 169

<212> PRT

<213> S.epidermidis

<400> 5104

Val	Asn	Thr	Phe	Ala	Leu	Gly	Ser	Glu	Asp	Met	Glu	Thr	Val	Tyr	Phe
1				5				10						15	
Ala	Gly	Gly	Cys	Leu	Trp	Gly	Thr	Gln	Ala	Phe	Phe	Asn	Thr	Ile	Pro
			20				25					30			
Gly	Val	Ile	Gln	Thr	Glu	Ala	Gly	Arg	Ala	Asn	Gly	Thr	Ser	Lys	Cys
		35				40					45				
Leu	Asp	Ala	Pro	Tyr	Asp	Gly	Tyr	Ala	Glu	Cys	Val	Lys	Ile	His	Phe
	50				55					60					
Asp	Pro	Ala	Lys	Thr	Ser	Ile	Leu	Met	Leu	Met	Asp	Tyr	Leu	Phe	Glu
65				70				75						80	
Met	Ile	Asn	Pro	Tyr	Ser	Leu	Asn	Gln	Gln	Gly	Gln	Asp	Lys	Gly	Gln
			85				90						95		
Lys	Tyr	Arg	Thr	Gly	Val	Tyr	Ser	Glu	Ser	Ser	Lys	His	Leu	Asn	Glu
			100				105						110		
Ala	Lys	Asp	Tyr	Ile	Lys	Arg	Arg	Glu	Asp	Ala	Lys	Gln	Val	Met	Val
		115				120						125			
Glu	Val	Gln	Pro	Leu	Ser	Asn	Tyr	Val	Lys	Ser	Ala	Glu	Glu	His	Gln
	130					135					140				
Asn	His	Leu	Glu	Lys	Phe	Pro	Glu	Asp	Tyr	Tyr	Leu	Cys	His	Val	Pro
145					150					155					160
Pro	Ala	Leu	Leu	Asn	Lys	Tyr	Lys	Lys							
				165											

<210> 5105

<211> 108

<212> PRT

<213> S.epidermidis

<400> 5105

Ile	Gln	Thr	Leu	Ser	Trp	Leu	Asn	Ile	Arg	Lys	Val	Thr	Ala	Gln	Arg
1				5				10						15	
Gly	Glu	Asn	His	Gln	Lys	Asn	Tyr	Lys	Lys	Asp	Asn	Phe	Tyr	Ile	Ile
		20					25					30			
Ser	Ile	Glu	Ile	Val	Phe	Ile	Tyr	Leu	Ser	Trp	Thr	Phe	Leu	Ser	Gln
		35				40					45				
Ala	His	Leu	Tyr	Ile	Tyr	Ile	Val	Phe	Trp	Met	Asn	Arg	Met	Met	Ala
	50					55					60				
Ile	Thr	Thr	Met	Thr	Ile	Ile	Glu	Thr	Lys	Asp	Lys	Ile	Leu	Lys	Cys
65				70					75					80	
Leu	Leu	Phe	Val	Ser	Leu	Leu	Asp	Ser	Pro	Phe	Ser	Ile	Ile	Ser	Cys

Ser Ser Arg Ser Ile Ser Arg Ser Lys Ser Val Phe
 100 85 90 95
 105

<210> 5106
 <211> 42
 <212> PRT
 <213> S.epidermidis

<400> 5106
 Ile Gln Thr Leu Ser Trp Leu Asn Ile Arg Lys Val Thr Ala Gln Arg
 1 5 10 15
 Ala Glu Asn His Gln Lys Asn Tyr Lys Lys Asp Asn Ser Tyr Ile Ile
 20 25 30
 Ser Ile Glu Ile Val Phe Phe Tyr Leu Ser
 35 40

<210> 5107
 <211> 317
 <212> PRT
 <213> S.epidermidis

<400> 5107
 Ser Phe Gln Phe Ile Ser Pro Ser Ile Ser Phe Ile Ile Ser Asn Ser
 1 5 10 15
 Ile Met Asn Arg Lys Lys Lys Gly Lys Asn Lys Val Met Thr Ile Ala
 20 25 30
 Ile Ile Gly Pro Gly Ala Val Gly Thr Thr Leu Ala Phe Glu Leu Lys
 35 40 45
 Lys Val Leu Pro Asp Thr Glu Leu Ile Gly Arg Gln Asp Lys Leu Met
 50 55 60
 Thr Tyr Phe Pro Glu Asn Thr Ser Asn Gly Ser Asn Val Lys Val Thr
 65 70 75 80
 Ser Phe Asn His Ile Asn Gln Thr Phe Asp Val Ile Ile Ile Ala Val
 85 90 95
 Lys Thr His Gln Leu Asp Asp Val Ile Lys Gln Leu Pro Lys Ile Thr
 100 105 110
 His Asp Asp Ser Leu Ile Ile Leu Ala Gln Asn Gly Tyr Gly Gln Leu
 115 120 125
 Asn Lys Leu Pro Tyr Gln His Val Phe Gln Ala Val Val Tyr Ile Ser
 130 135 140
 Gly Gln Lys Val Asn Asn Asn Val Gln His Phe Arg Asp Tyr Gln Leu
 145 150 155 160
 Tyr Ile Gln Asp Ser Thr Leu Thr Arg Gln Phe Lys Gln Met Val His
 165 170 175
 Pro Ser Lys Ile Glu Val Val Leu Gln Glu Asn Ile Glu Lys Ser Ile
 180 185 190
 Trp Tyr Lys Leu Leu Val Asn Leu Gly Ile Asn Thr Ile Thr Ala Ile
 195 200 205
 Gly Gln Gln Pro Ala Lys Ile Leu Lys Ser Pro His Ile Glu Ser Leu
 210 215 220
 Cys Arg Arg Ile Leu Val Asp Gly Leu Lys Val Ala Arg Ala Glu Gln
 225 230 235 240
 Ile Asp Phe Glu Asp His Ile Val Asp Asp Ile Leu Asn Ile Tyr Lys
 245 250 255
 Gly Tyr Pro Asp Glu Met Gly Thr Ser Met Tyr Tyr Asp Val Ile Asn

1		5		10		15									
Asn	Asn	Arg	Phe	Leu	Lys	Glu	Ser	Cys	Tyr	Leu	Leu	Gly	Asn	Asn	Ile
		20						25					30		
Ser	Met	Gly	Thr	Leu	Arg	Gln	Glu	Ser	Cys	Asp	Ser	Cys	Leu	Ser	Phe
		35					40					45			
Ile	Phe	Leu	Gly	Lys	His	Leu	Thr	Tyr	Ser	Asn	Asp	Asn	Gln	Tyr	Lys
	50					55					60				
Phe	Asn	Lys	Tyr	Thr	Ile										
65					70										

<210> 5114

<211> 55

<212> PRT

<213> S.epidermidis

<400> 5114

Lys	Cys	Glu	Leu	Arg	Trp	Tyr	Leu	Asn	Arg	Leu	Ser	Arg	Cys	Val	Ser
1			5					10					15		
Phe	Val	Ser	Leu	His	Ile	Met	Glu	Val	Glu	Arg	Ser	Asn	Cys	Ile	Ala
			20				25					30			
Ile	Leu	Met	Lys	Val	Glu	Gly	Val	Ile	Val	Lys	Ser	Val	Ile	His	Ile
		35				40						45			
Tyr	Asp	Asn	Met	Glu	Leu	Cys									
	50					55									

<210> 5115

<211> 510

<212> PRT

<213> S.epidermidis

<400> 5115

Ala	Ile	Thr	Ser	Asn	Ile	Thr	Lys	Lys	Gly	Trp	Val	Leu	Met	Thr	Asn
1				5					10				15		
Ile	Asn	Val	Arg	Asn	Tyr	Ile	Asp	Glu	Ser	Tyr	Gly	Leu	Phe	Ile	Asn
			20				25					30			
Asn	Glu	Phe	Gln	Ala	Ser	Asp	Ser	Gly	Glu	Thr	Leu	Thr	Val	Ser	Asn
		35				40					45				
Pro	Ala	Asn	Gly	Glu	Asp	Leu	Ala	Lys	Val	Ala	Arg	Ala	Gly	Lys	Lys
	50				55				60						
Asp	Val	Asp	Lys	Ala	Val	Gln	Ala	Ala	His	Asp	Ala	Phe	Asp	Ser	Trp
65				70				75					80		
Ser	Lys	Ile	Ser	Lys	Glu	Glu	Arg	Ala	Asp	Tyr	Leu	Leu	Glu	Ile	Ser
		85					90						95		
Arg	Arg	Ile	His	Glu	Lys	Thr	Glu	His	Leu	Ala	Thr	Val	Glu	Ser	Leu
		100				105						110			
Gln	Asn	Gly	Lys	Pro	Tyr	Arg	Glu	Thr	Ser	Thr	Ile	Asp	Val	Pro	Gln
		115				120					125				
Ala	Ala	Asn	Gln	Phe	Lys	Tyr	Phe	Ala	Ser	Val	Leu	Thr	Thr	Asp	Glu
	130				135					140					
Gly	Ser	Val	Asn	Glu	Ile	Asp	Gln	Asn	Thr	Met	Ser	Leu	Val	Val	Asn
145			150			155								160	
Glu	Pro	Val	Gly	Val	Val	Gly	Thr	Val	Val	Ala	Trp	Asn	Phe	Pro	Ile
			165			170						175			
Leu	Leu	Ala	Ser	Trp	Lys	Leu	Gly	Pro	Ala	Leu	Ala	Ala	Gly	Asn	Thr
		180				185						190			
Val	Val	Ile	Gln	Pro	Ser	Ser	Ser	Thr	Pro	Leu	Ser	Leu	Ile	Glu	Leu

195 200 205
 Ala Lys Ile Phe Gln Glu Val Leu Pro Lys Gly Val Val Asn Val Leu
 210 215 220
 Thr Gly Lys Gly Ser Glu Ser Gly Asp Ala Ile Phe His His Glu Gly
 225 230 235 240
 Val Asp Lys Leu Ser Phe Thr Gly Ser Thr Asp Val Gly Tyr Gly Val
 245 250 255
 Ala Gln Ala Gly Ala Glu Arg Ile Val Pro Thr Thr Leu Glu Leu Gly
 260 265 270
 Gly Lys Ser Ala Asn Ile Ile Phe Asp Asp Ala Asn Leu Glu Gln Val
 275 280 285
 Ile Glu Gly Val Gln Leu Gly Ile Leu Phe Asn Gln Gly Glu Val Cys
 290 295 300
 Ser Ala Gly Ser Arg Leu Leu Val Gln Ser Ser Ile Tyr Asn Glu Leu
 305 310 315 320
 Leu Pro Lys Leu Lys Glu Ala Phe Glu Asn Ile Lys Val Gly Asp Pro
 325 330 335
 Phe Asp Glu Asp Thr Lys Met Ser Ala Gln Thr Gly Pro Glu Gln Leu
 340 345 350
 Asp Lys Ile Glu Ser Tyr Ile Lys Ile Ala Glu Glu Asp Asp Lys Ala
 355 360 365
 Asn Ile Leu Thr Gly Gly His Arg Ile Thr Asp Asn Gly Leu Asp Lys
 370 375 380
 Gly Tyr Phe Phe Glu Pro Thr Ile Ile Glu Ile Asn Asp Asn Lys His
 385 390 395 400
 Gln Leu Ala Gln Glu Glu Ile Phe Gly Pro Val Val Val Val Glu Lys
 405 410 415
 Phe Asp Asp Glu Gln Glu Ala Ile Glu Ile Ala Asn Asp Ser Glu Tyr
 420 425 430
 Gly Leu Ala Gly Gly Ile Phe Thr Thr Asp Ile His Arg Ala Leu Asn
 435 440 445
 Val Ala Lys Ala Met Arg Thr Gly Arg Ile Trp Ile Asn Thr Tyr Asn
 450 455 460
 Gln Ile Pro Ala Gly Ala Pro Phe Gly Gly Tyr Lys Lys Ser Gly Ile
 465 470 475 480
 Gly Arg Glu Val Tyr Lys Asp Ala Ile Lys Asn Tyr Gln Gln Val Lys
 485 490 495
 Asn Ile Phe Ile Asp Thr Ser Asn Gln Thr Lys Gly Leu Tyr
 500 505 510

<210> 5116

<211> 52

<212> PRT

<213> S.epidermidis

<400> 5116

Leu Leu Tyr Ser Cys Asn Asn Lys Phe Cys Tyr Tyr Tyr Asn Phe Ser
 1 5 10 15
 Phe Asp Glu Phe Asn Leu Ser Phe Lys Tyr Leu Ala Asn Lys Glu Tyr
 20 25 30
 Leu Leu Asp Val Asn Leu Ile Leu Asp Ile Val Lys Ile Val His Lys
 35 40 45
 Ile Asp Lys Lys
 50

<210> 5117

<211> 44
 <212> PRT
 <213> S.epidermidis

<400> 5117
 Tyr Thr His Ser Ile Lys Arg Leu Gln Tyr Phe Leu Lys Ile Leu His
 1 5 10 15
 Lys Lys Thr Arg Leu Leu Arg Val Glu Phe Leu Lys Met Tyr Tyr Tyr
 20 25 30
 Lys Lys Arg Leu Ala Ala Thr Glu Ile Gly Gly Ile
 35 40

<210> 5118
 <211> 67
 <212> PRT
 <213> S.epidermidis

<400> 5118
 Leu Lys Glu Leu Asn Thr Thr Phe Gly Asp Lys Gln Arg Gly Gln Val
 1 5 10 15
 Thr Asn Glu Ile Leu Asn Glu Ser Lys Lys Asp Ile Pro Asn Ser Tyr
 20 25 30
 Ile Thr Tyr Asn Ser Gln Ile Asp Gly Val Asn Asn Lys Val Arg His
 35 40 45
 Phe Asn Val Thr Pro Glu Ser Ile Tyr Leu Ile Asp Tyr Lys Leu Ser
 50 55 60
 Lys Lys Glu
 65

<210> 5119
 <211> 46
 <212> PRT
 <213> S.epidermidis

<400> 5119
 Asn Thr Asn Ser Ile Ala Phe Leu Glu Phe Ile Ile Leu Ala Leu Tyr
 1 5 10 15
 Phe Ser Asp Lys Ile Ile Tyr Ser Asn Thr Ser Ser Ser Ser Leu Ile
 20 25 30
 Leu Ile Val Leu Asn Phe Asn Asn Arg Ile Lys Val Asn Tyr
 35 40 45

<210> 5120
 <211> 88
 <212> PRT
 <213> S.epidermidis

<400> 5120
 Thr Asp Tyr Ser Ser Ile Ile Phe Asp Ala Leu Thr Val Asp Lys Lys
 1 5 10 15
 Gly Cys Leu Tyr Thr Pro Asn His Ser Gln Tyr Val Glu Glu Arg Gly
 20 25 30
 Val Tyr Gln Asp Val Met Asp Thr Leu Lys Pro Ile Trp Tyr Thr Asp
 35 40 45
 Ala Glu Leu Leu Ile Asn Asp Leu Ile Thr Asp Ser Ile Pro Gln Leu
 50 55 60

Asn Asn Lys Tyr Thr Asn Lys Asn Asn Gln Ser Phe Glu Tyr Ile Ser
 65 70 75 80
 Lys Leu Ile Ser Asn Gln Leu Lys
 85

<210> 5121
 <211> 340
 <212> PRT
 <213> S.epidermidis

<400> 5121
 Phe Asn Ser Ser Leu Glu Glu Cys Arg Asn Met Val Glu Lys Phe Lys
 1 5 10 15
 Ala Phe Val Val Asp Gln Asp Asp Asn Gly Ile Val Ser Asn Ser Tyr
 20 25 30
 Lys Glu Leu Thr Lys Asp Asp Leu Pro Glu Gly Asp Val Leu Ile Lys
 35 40 45
 Val His Tyr Ser Gly Ile Asn Tyr Lys Asp Ala Leu Ala Thr Gln Asp
 50 55 60
 His Asn Lys Ile Val Lys Gln Tyr Pro Met Val Pro Gly Ile Asp Leu
 65 70 75 80
 Ala Gly Thr Ile Glu Glu Thr Asn Ala Pro Gly Phe Glu Val Gly Asp
 85 90 95
 Lys Val Ile Val Thr Ser Tyr Asp Leu Gly Val Ser His Tyr Gly Gly
 100 105 110
 Phe Ser Glu Tyr Ala Arg Val Lys Ser Glu Trp Val Ile Glu Leu Pro
 115 120 125
 Glu Asp Leu Thr Leu Glu Glu Ala Met Ile Tyr Gly Thr Ala Gly Tyr
 130 135 140
 Thr Ala Gly Leu Ala Ile Glu Gln Leu Glu Lys Ser Gly Met Ser Ile
 145 150 155 160
 Glu Gly Lys Glu Val Leu Val Arg Gly Ala Thr Gly Gly Val Gly Thr
 165 170 175
 Ile Ser Leu Leu Met Leu Asn Asn Leu Gly Tyr Asp Val Ile Ala Ser
 180 185 190
 Thr Gly Arg Asp Asp Ala Glu Glu Lys Leu Lys Lys Leu Gly Ala Lys
 195 200 205
 Glu Val Ile Gly Arg Leu Pro Glu Asp Asn Ser Lys Pro Leu Glu Lys
 210 215 220
 Arg Thr Trp Gln Ala Ala Ile Asp Pro Val Gly Gly Glu Asn Leu Pro
 225 230 235 240
 Tyr Ile Val Lys Arg Leu Asp Asn Asn Gly Ser Val Ala Leu Ile Gly
 245 250 255
 Met Thr Gly Gly Asn Asn Phe Glu Thr Thr Val Phe Pro Phe Ile Leu
 260 265 270
 Arg Gly Ala Ser Ile Ile Gly Ile Asp Ser Val Phe Thr Pro Ile Lys
 275 280 285
 Leu Arg Lys Arg Val Trp Arg Arg Leu Ala Lys Asp Leu Lys Pro Gln
 290 295 300
 Gln Leu His Asp Ile Lys His Val Ile Ser Phe Asp Glu Ile Pro Lys
 305 310 315 320
 Ala Ile Asp Gln Val Ile Asn His Asn Asn Thr Gly Arg Ile Val Ile
 325 330 335
 Asp Phe Asn Val
 340

<210> 5122
 <211> 295
 <212> PRT
 <213> S.epidermidis

<400> 5122

```

Phe Glu Met Ser Ala Gln Asp Pro Arg Asn Lys Phe Lys Thr Asp Asn
1      5      10      15
Tyr Glu Lys Gln Glu Gln Glu Val Pro Gly Ile Gln Ala Lys Met Ser
      20      25      30
Pro Gln Pro Asp Cys Gly Glu Asp Ser Tyr His Gly His His Arg Leu
      35      40      45
Asp Gly Phe Lys Ile Leu Val Thr Gly Gly Asp Ser Ala Ile Gly Arg
      50      55      60
Ala Ala Ala Ile Ala Tyr Ala Lys Glu Gly Ala Asp Val Ala Ile Asn
      65      70      75      80
Tyr Leu Pro Ser Glu Gln Gln Asp Ala Asp Asp Val Lys Gln Ile Ile
      85      90      95
Glu Asn Val Gly Gln Lys Ala Ile Leu Ile Pro Gly Asp Ile Arg Asp
      100     105     110
Glu Gln Phe Asn Tyr Asp Met Val Glu Lys Ala Tyr Gln Gln Leu Gly
      115     120     125
Gly Leu Asp Asn Val Thr Leu Val Ala Gly His Gln Leu Tyr Gln Asp
      130     135     140
Glu Leu Ser Glu Phe Lys Thr Gln Asp Phe Thr Glu Thr Phe Glu Thr
      145     150     155     160
Asn Val Tyr Pro Val Phe Trp Thr Val Gln Lys Ala Leu Glu Tyr Leu
      165     170     175
Gln Pro Gly Gly Ser Ile Thr Thr Thr Ser Ser Val Gln Gly Tyr Asn
      180     185     190
Pro Ser Pro Ile Leu His Asp Tyr Ala Ala Thr Lys Ala Ala Ile Ile
      195     200     205
Ser Leu Thr Lys Ser Phe Ser Ala Glu Leu Gly Pro Lys Gly Ile Arg
      210     215     220
Val Asn Cys Val Ala Pro Gly Pro Phe Trp Ser Pro Leu Gln Ile Val
      225     230     235     240
Gly Gly Gln Pro Gln Ser Ala Ile Pro Thr Phe Gly Gln Asn Thr Pro
      245     250     255
Leu Gly Arg Ala Gly Gln Pro Val Glu Cys Ala Gly Thr Tyr Val Leu
      260     265     270
Leu Ala Ser Asp Asp Ala Ser Tyr Ile Thr Gly Gln Val Tyr Gly Val
      275     280     285
Thr Gly Gly Thr Gln Ile Asp
      290     295

```

<210> 5123
 <211> 67
 <212> PRT
 <213> S.epidermidis

<400> 5123

```

Ile Ser Gln Ser Ser Asp Tyr Val Arg His Leu Asn His Trp Thr Gly
1      5      10      15
Phe Phe Ile Ser Ile Asn Leu Asn Asn Asn Gln Tyr Lys Phe Ala Ile
      20      25      30
Leu Ile Lys Asn Asn Leu Leu Arg Phe Ile Arg Thr Ile Glu Met Ile

```


Val Leu Thr Leu Leu Gln Ile Ser Cys Asn Val Lys His Asn Ser Ile
 1 5 10 15
 Thr Tyr Gln Glu Lys Trp Arg Asp Trp Pro Lys Glu Ala Ser Ala Thr
 20 25 30
 Leu Tyr His Val Pro Ile Pro Val Thr Glu Lys Val Arg Arg
 35 40 45

<210> 5127

<211> 322

<212> PRT

<213> S.epidermidis

<400> 5127

Gly Ile Lys Thr Met Leu Leu Phe Leu Cys Phe Leu Ile Glu Leu Leu
 1 5 10 15
 Leu Ile Val Leu Leu Tyr Thr Lys Gln Ser Phe Thr Leu Asn Leu Phe
 20 25 30
 Ser Phe Ile Leu Tyr Asn Ile Ile Gly Phe Val Met Met Thr Tyr His
 35 40 45
 Met Val Thr Val Ser Ile Pro Tyr Asp Met Phe Ile Ile Val Ile Val
 50 55 60
 Ala Met Ile Leu Leu Leu Ile Lys His Arg Tyr Ile Phe Lys Leu Gln
 65 70 75 80
 Thr Gly Arg Phe Phe Ile Leu Gln Leu Ser His His Phe Tyr Thr Val
 85 90 95
 Gly Leu Phe Ala Val Ser Cys Leu Tyr Ile Ser Thr Ile Pro Leu Ile
 100 105 110
 Ile Ile Asn Ser Leu Ala Leu Trp Ala Ala Thr Ile Ala Phe Ser Thr
 115 120 125
 Ile Tyr Ser Phe Ile Gly Tyr Leu Ser Trp Ser Thr Ala Phe Glu Asn
 130 135 140
 His Gln Tyr Tyr Lys His Val Lys Leu Ile Met Val Leu Gly Ala Gly
 145 150 155 160
 Ile Phe Ser Glu Glu Val Thr Thr Leu Leu Ala Ala Arg Leu Asp Lys
 165 170 175
 Ala Leu Ser Val Tyr His Ser Gln Arg Thr Lys Pro Ile Ile Ile Val
 180 185 190
 Ser Gly Gly Gln Gly Pro Asp Glu Pro Ile Ser Glu Ala Leu Ala Met
 195 200 205
 Lys Arg Tyr Leu Ile Ala His Asn Val Pro Glu Asn His Ile Phe Met
 210 215 220
 Glu Asn Gln Ser Thr Asn Thr Arg Thr Asn Phe Leu Tyr Ser Lys Ser
 225 230 235 240
 Ile Ile His Ser Met Met Pro Thr Ser Ser Gln Met Leu Cys Val Thr
 245 250 255
 Ser Gln Phe His Val Leu Arg Ala Leu Lys Phe Ala Lys Lys Ala His
 260 265 270
 Leu Ser Phe Asp Gly Ile Gly Ser Arg Thr Pro Tyr His Phe Leu Ala
 275 280 285
 Gln Ser Met Ile Ile Asp Phe Leu Gly Leu Met Tyr Gln Tyr Lys Thr
 290 295 300
 Ile Leu Thr Ile Tyr Phe Ala Met Leu Phe Trp Leu Ala Ile Leu Gln
 305 310 315 320
 Thr Ile

<210> 5128
 <211> 46
 <212> PRT
 <213> S.epidermidis

<400> 5128
 Phe Thr Lys Thr Asn Lys Ser Glu Ala Lys Asn Leu Pro Lys Phe Leu
 1 5 10 15
 Ala Ser Val Leu Phe Tyr Ser Arg Asp Phe Val Thr Leu Ile Lys Met
 20 25 30
 Asn Met Phe Tyr Asn Ile Ile Leu Arg Arg Ile Phe Tyr Ala
 35 40 45

<210> 5129
 <211> 210
 <212> PRT
 <213> S.epidermidis

<400> 5129
 Met Ser Glu Thr Leu Gln Asn Gln Arg Gln Phe Asn Ser Gln Phe Glu
 1 5 10 15
 His Gln Glu Ile His Arg Gly Lys Arg Tyr Gly Lys Lys Lys Arg Ser
 20 25 30
 Trp Val Ser Leu Ile Ile Gln Val Phe Val Leu Val Leu Thr Ala Ile
 35 40 45
 Thr Gly Tyr Ser Met Leu Lys Gln Pro Ile Phe Lys Ile Ser Phe Val
 50 55 60
 Asn Glu Thr Ile Asn Phe His Gln Leu Arg Asn Phe Gln Asp Thr Val
 65 70 75 80
 Thr Gln Ile Gly Asn Leu Asn Leu Gly Asn Ile Asp Gln Leu Gln Gln
 85 90 95
 Ser Val Asp Asn Leu Ile Ile Ile Phe Asn Ile Phe Phe Val Leu Cys
 100 105 110
 Leu Ile Ser Leu Phe Ile Thr Val Ile Thr Ile Ile Phe Asn Arg Thr
 115 120 125
 Ala Leu Lys Val Val Asn Ile Leu Leu Leu Ala Ile Met Leu Val Ile
 130 135 140
 Thr Leu Tyr Phe Ser Tyr Ile Ile His Thr Ile Ala Gln Lys Ile Ser
 145 150 155 160
 Glu Ser Leu Lys Gln Tyr Tyr Leu Thr Val Ser Pro Glu Gln Val Leu
 165 170 175
 Thr Glu Ala Asp Ala Ile His Asn Ala Leu Ile Leu Ile Gly Cys Ser
 180 185 190
 Ile Ala Leu Leu Ile Val Ser Leu Phe Phe Arg Asn Arg Leu Pro Arg
 195 200 205
 Ile Lys
 210

<210> 5130
 <211> 158
 <212> PRT
 <213> S.epidermidis

<400> 5130
 Met Asn Lys Thr Phe Thr Val Thr Arg Thr Val Thr Glu Asp Ala Ile
 1 5 10 15

```

Asp Asn Asn Asn His Met His Asp Ala Tyr Tyr Asn Ile Ile Phe Ser
      20      25      30
Glu Val Ile Asn Lys Phe Asn Glu Val His Gly Leu Ser Trp Ser Glu
      35      40      45
Arg Asp Arg Leu Gln Tyr Thr Val Phe Thr Val Glu Thr His Thr Thr
      50      55      60
Phe Leu His Glu Leu Thr Leu Gly Gln Glu Phe Asn Ile Glu Leu Phe
65      70      75      80
Leu Tyr Asn Tyr Asp Asp Lys Arg Thr His Phe Phe Leu Arg Met Leu
      85      90      95
Ile Asp Asn Gln Glu Val Val Ala Thr Asn Glu Val Met Met Leu Gly
      100      105      110
Ile Asp Arg Thr Gln Arg Arg Ala Ala Pro Phe Pro Lys His Tyr Leu
      115      120      125
Asn Ala Ile Gln Asp Tyr Ala His Lys Gln Glu Lys Ile Glu Trp Pro
      130      135      140
Pro Gln Leu Gly His Ser Ile Gly Ile Pro Tyr Lys Gly Glu
145      150      155

```

<210> 5131

<211> 727

<212> PRT

<213> S.epidermidis

<400> 5131

```

Arg Glu Arg Thr Tyr Ser Met Asn Lys Leu Thr Ile Ile Val Thr Tyr
1      5      10      15
Tyr Asn Ala Glu Glu Tyr Ile Thr Gly Cys Leu Glu Ser Ile Lys Gln
      20      25      30
Gln Arg Thr Gln Asp Phe Asn Leu Ile Ile Val Asn Asp Gly Ser Thr
      35      40      45
Asp Gln Ser Lys Lys Leu Met Asp Glu Ala Ile Lys Asp Tyr Asp Lys
50      55      60
Asn Ile Arg Phe Ile Asp Leu Asp Glu Asn Ser Gly His Ala His Ala
65      70      75      80
Arg Asn Ile Ala Leu Glu Glu Val Glu Thr Pro Tyr Phe Met Phe Leu
      85      90      95
Asp Ala Asp Asp Glu Leu Ala Ser Tyr Ala Ile Thr Phe Tyr Leu Glu
      100      105      110
Lys Phe Asn Asn Thr Asp Gly Leu Ile Ala Pro Ile His Ser Phe Thr
      115      120      125
Thr Gln Arg Pro Gln Phe Val Asp Leu Asp Arg Val Arg Val Glu Tyr
      130      135      140
Phe Asn Ala Lys Glu Asn Ile Asn Ser Phe Leu Arg Lys Gln Ser Ala
145      150      155      160
Cys Asn Ile Ile Phe Arg Thr Ala Ile Val Arg Ala His His Ile Arg
      165      170      175
Phe Asn Glu Asn Leu Asn Thr Tyr Val Asp Trp Ser Phe Val Leu Glu
      180      185      190
Tyr Met Lys Tyr Val Asn Lys Phe Val Arg Ile Phe Asn Phe Pro Phe
      195      200      205
Tyr Phe Arg Gly Glu Val Tyr Asp Pro Phe Glu Thr Leu Thr Leu Ser
      210      215      220
Glu Gln Asn Phe Asp Ile Leu Phe Lys Asp Tyr Val Asn Ser Phe Tyr
225      230      235      240
Asp Ala Ile Lys Arg Ala Thr Asn Pro Lys Val Arg Glu Phe Ile Val

```

				245					250					255			
Thr	Lys	Met	Gly	Asn	Lys	Ile	Ala	Asn	Glu	Phe	Glu	Pro	Thr	Arg	Tyr		
			260					265					270				
Asp	Ile	Asn	Glu	Arg	Tyr	Gln	Thr	His	Lys	Asp	Thr	Leu	Val	Glu	Leu		
		275					280					285					
Ser	Lys	Phe	Leu	His	Val	His	Leu	Val	Lys	Asn	Gln	Lys	Leu	Ile	Asn		
	290					295					300						
Lys	Ile	Glu	Thr	Ile	Leu	Leu	Met	Asn	Asn	Glu	Thr	Asp	Lys	Ala	Phe		
305					310					315					320		
Lys	Val	Asn	Gln	Phe	Arg	Lys	Thr	Leu	Arg	His	Val	Lys	Asn	Ile	Val		
			325						330					335			
Leu	Arg	Arg	Lys	Asn	Lys	Glu	Arg	Ser	Leu	Tyr	Asp	Leu	Thr	Asp	Lys		
			340					345					350				
Glu	Asp	Asn	Val	Lys	Pro	Lys	Thr	Ile	Val	Phe	Glu	Ser	Phe	Gly	Gly		
		355					360					365					
Lys	Asn	Tyr	Ser	Asp	Ser	Pro	Lys	Tyr	Ile	Tyr	Glu	Tyr	Met	Gln	Lys		
	370					375						380					
Tyr	Tyr	Pro	Asn	Tyr	Arg	Tyr	Ile	Trp	Ser	Phe	Lys	Asn	Pro	Asp	Lys		
385					390					395					400		
Asn	Val	Val	Pro	Gly	Ser	Ala	Glu	Lys	Val	Lys	Arg	Asn	Ser	Ala	Glu		
				405					410					415			
Tyr	Tyr	Gln	Ala	Tyr	Ser	Glu	Ala	Ser	His	Trp	Val	Ser	Asn	Ala	Arg		
			420					425					430				
Thr	Pro	Leu	Tyr	Leu	Asn	Lys	Lys	Glu	Asn	Gln	Thr	Tyr	Ile	Gln	Thr		
		435					440						445				
Trp	His	Gly	Thr	Pro	Leu	Lys	Arg	Leu	Ala	Asn	Asp	Met	Lys	Val	Val		
	450					455					460						
Arg	Met	Pro	Gly	Thr	Thr	Pro	Lys	Tyr	Lys	Arg	Asn	Phe	Asn	Arg			
465					470					475					480		
Glu	Thr	Ser	Arg	Trp	Asp	Tyr	Leu	Ile	Ser	Pro	Asn	Arg	Tyr	Ser	Thr		
				485					490					495			
Glu	Ile	Phe	Arg	Ser	Ala	Phe	Trp	Met	Asp	Glu	Glu	Arg	Ile	Leu	Glu		
			500					505					510				
Ile	Gly	Tyr	Pro	Arg	Asn	Asp	Val	Leu	Val	Asn	Arg	Ala	Asn	Asp	Gln		
		515					520						525				
Glu	Tyr	Leu	Asp	Glu	Ile	Arg	Thr	His	Leu	Asn	Leu	Pro	Ser	Asp	Lys		
	530					535						540					
Lys	Val	Ile	Met	Tyr	Ala	Pro	Thr	Trp	Arg	Asp	Asp	Glu	Phe	Val	Ser		
545					550					555					560		
Lys	Gly	Lys	Tyr	Leu	Phe	Glu	Leu	Lys	Ile	Asp	Leu	Asp	Asn	Leu	Tyr		
				565					570					575			
Lys	Glu	Leu	Gly	Asp	Asp	Tyr	Val	Ile	Leu	Leu	Arg	Met	His	Tyr	Leu		
			580					585					590				
Ile	Ser	Asn	Ala	Leu	Asp	Leu	Ser	Gly	Tyr	Glu	Asn	Phe	Ala	Ile	Asp		
		595					600						605				
Val	Ser	Asn	Tyr	Asn	Asp	Val	Ser	Glu	Leu	Phe	Leu	Ile	Ser	Asp	Cys		
	610					615						620					
Leu	Ile	Thr	Asp	Tyr	Ser	Ser	Val	Met	Phe	Asp	Tyr	Gly	Ile	Leu	Lys		
625					630					635					640		
Arg	Pro	Gln	Phe	Phe	Ala	Tyr	Asp	Ile	Asp	Lys	Tyr	Asp	Lys	Gly			
				645				650						655			
Leu	Arg	Gly	Phe	Tyr	Met	Asn	Tyr	Met	Glu	Asp	Leu	Pro	Gly	Pro	Ile		
			660					665					670				
Tyr	Thr	Glu	Pro	Tyr	Gly	Leu	Ala	Lys	Glu	Leu	Lys	Asn	Leu	Asp	Lys		
		675				680						685					
Val	Gln	Gln	Gln	Tyr	Gln	Glu	Lys	Ile	Asp	Ala	Phe	Tyr	Asp	Arg	Phe		

690		695		700
Cys Ser Val Asp Asn Gly Lys Ala Ser Gln Tyr Ile Gly Asp Leu Ile				
705		710		715
His Lys Asp Ile Lys Glu Gln				720
		725		

<210> 5132
 <211> 499
 <212> PRT
 <213> S.epidermidis

<400> 5132

Lys Arg Gly Thr Val Phe Val Met Asn Thr Gln His Ser Lys Thr Asp				
1	5		10	15
Val Ile Leu Ile Gly Gly Gly Ile Met Ser Ala Thr Leu Gly Thr Leu				
	20		25	30
Leu Lys Glu Leu Thr Pro Glu Lys Asp Ile Gln Leu Phe Glu Arg Leu				
	35		40	45
Ser Gln Pro Gly Glu Glu Ser Ser Asn Val Trp Asn Asn Ala Gly Thr				
	50		55	60
Gly His Ser Ala Leu Cys Glu Leu Asn Tyr Thr Lys Glu Gly Lys Asp				
65	70		75	80
Gly Ser Val Asp Ile Thr Lys Ala Ile His Ile Asn Glu Gln Phe Gln				
	85		90	95
Ile Ser Lys Gln Phe Trp Ala Tyr Leu Ile Arg Glu Gly His Ile Glu				
	100		105	110
Ser Pro Asp Lys Phe Ile Gln Ser Val Pro His Met Ser Phe Val Lys				
	115		120	125
Gly Glu Glu Asn Val Lys Phe Leu Lys Ser Arg Val Ala Ser Leu Gln				
	130		135	140
Lys Asn Val Leu Phe Glu Lys Met Lys Ile Ser Gln Asp Pro Glu Lys				
145	150		155	160
Ile Asn Ser Trp Val Pro Leu Met Met Glu Gly Arg Gln Ser Asp Glu				
	165		170	175
Ala Ile Ala Ile Thr Tyr Asp Glu Thr Gly Thr Asp Val Asn Phe Gly				
	180		185	190
Ala Leu Thr Lys Lys Leu Ile Ala Asn Leu Gln Gln Lys Asn Val Gly				
	195		200	205
Ile Asn Tyr Lys His Glu Val Leu Asp Ile Lys Lys Leu Asn Asn Gly				
	210		215	220
Asn Trp Gln Val Val Val Lys Asp Leu Asn Thr Ser Asn Val Met Asn				
225	230		235	240
Tyr Glu Ser Lys Phe Val Phe Ile Gly Ala Gly Gly Ala Ser Leu Pro				
	245		250	255
Leu Leu Gln Lys Thr Lys Ile Lys Glu Ser Lys His Ile Gly Gly Phe				
	260		265	270
Pro Val Ser Gly Leu Phe Leu Arg Cys Lys Asn Pro Asp Val Ile His				
	275		280	285
Arg His Ala Lys Val Tyr Gly Lys Ala Glu Val Gly Ala Pro Pro				
	290		295	300
Met Ser Val Pro His Leu Asp Thr Arg Phe Val Asn Gly Glu Lys Ser				
305	310		315	320
Leu Leu Phe Gly Pro Phe Ala Gly Phe Ser Pro Lys Phe Leu Lys Asn				
	325		330	335
Gly Ser Tyr Leu Asp Leu Val Lys Ser Val Lys Pro Asn Asn Met Ile				
	340		345	350

<213> S.epidermidis

<400> 5135

Leu	Ser	Arg	Ala	Ile	Leu	Leu	Phe	Lys	Phe	Tyr	Leu	Ser	Thr	Gly	Leu
1				5					10					15	
Ala	Leu	Ser	Pro	Trp	Lys	Phe	Val	Ser	Leu	Arg	Leu	Tyr	Phe	Gly	Leu
			20					25					30		
Gly	Pro	Tyr	Leu	Leu	Asp	Ser	Val	Leu	Leu	Ser	Lys	Gln	Val	Asn	Thr
		35				40						45			
Asn	Ile	Asn	Ile	Asp	Pro	Ile	Gln								
	50					55									

<210> 5136

<211> 662

<212> PRT

<213> S.epidermidis

<400> 5136

Gly	Gly	His	Phe	Met	Thr	Ala	Thr	Phe	Ile	Ile	Ile	Tyr	Ile	Val	Val
1				5					10					15	
Ala	Leu	Ile	Leu	Ile	Gly	Phe	Ile	Asn	Phe	Phe	Leu	Ile	Lys	Arg	Lys
			20					25					30		
Arg	Lys	Asn	Lys	Asp	Lys	Arg	Val	Glu	Gln	Arg	Ser	Thr	Ile	Asp	Ser
		35				40						45			
Lys	Arg	Glu	Ser	Asn	Gln	Ser	Lys	Phe	Lys	Ala	Ser	Asp	Leu	Glu	Gln
	50					55				60					
Thr	Thr	Lys	Ser	Asn	Thr	Asp	Pro	Thr	Gln	Ser	Asn	Asp	Ile	Glu	Asp
65					70					75				80	
Glu	Lys	Arg	Lys	Asn	His	Phe	Asp	Ser	Glu	Ile	Asp	Asn	Ala	Ser	Gln
				85					90					95	
Phe	Ile	Asn	Thr	Asp	Ser	Lys	Glu	Asp	Arg	Asn	Ala	Leu	Ser	His	Lys
			100					105					110		
Asn	Gln	Glu	Glu	Asp	Asp	Ala	Ser	Asn	Asp	Val	Leu	Asn	Pro	Ile	Asp
		115					120					125			
Pro	Asn	Ser	Thr	Glu	Gly	Arg	Val	Asn	Glu	Arg	Ile	Lys	Asn	Gln	Glu
	130					135					140				
Ser	Asn	Phe	Ile	Phe	Gly	Lys	Gly	Ile	Thr	Arg	Gly	Lys	Ile	Leu	Ala
145					150					155				160	
Ala	Met	Leu	Phe	Gly	Met	Phe	Ile	Ala	Ile	Leu	Asn	Gln	Thr	Leu	Leu
				165					170					175	
Asn	Val	Ala	Leu	Pro	Lys	Ile	Asn	Thr	Glu	Phe	Asn	Ile	Ser	Ala	Ser
			180					185					190		
Thr	Gly	Gln	Trp	Leu	Met	Thr	Gly	Phe	Met	Leu	Val	Asn	Gly	Ile	Leu
	195						200					205			
Ile	Pro	Ile	Ser	Ala	Phe	Leu	Phe	Asn	Lys	Tyr	Ser	Tyr	Arg	Lys	Leu
	210					215					220				
Phe	Ile	Ile	Gly	Leu	Ala	Leu	Phe	Thr	Leu	Gly	Ser	Leu	Val	Cys	Ala
225					230					235				240	
Ile	Ser	Phe	Asn	Phe	Pro	Ile	Met	Met	Ser	Gly	Arg	Val	Leu	Gln	Ala
				245					250					255	
Ile	Gly	Ala	Gly	Ile	Leu	Met	Pro	Leu	Gly	Ser	Asn	Val	Ile	Val	Thr
			260					265					270		
Ile	Phe	Pro	Pro	Glu	Lys	Arg	Gly	Val	Ala	Met	Gly	Thr	Met	Gly	Ile
		275					280					285			
Ala	Met	Ile	Leu	Ala	Pro	Ala	Ile	Gly	Pro	Thr	Leu	Ser	Gly	Tyr	Ile
	290					295					300				

Val Gln Asn Tyr Asp Trp Asn Val Met Phe Tyr Gly Met Phe Phe Ile
 305 310 315 320
 Gly Ile Ile Ala Ile Val Ile Gly Leu Phe Trp Phe Lys Leu Tyr Gln
 325 330 335
 Ser Thr Thr Asn Pro Lys Ala Asp Ile Pro Gly Ile Ile Tyr Ser Thr
 340 345 350
 Ile Gly Phe Gly Ser Leu Leu Tyr Gly Phe Ser Glu Ala Gly Asn Lys
 355 360 365
 Gly Trp Gly Ser Thr Glu Ile Val Thr Met Phe Ile Val Gly Thr Val
 370 375 380
 Phe Ile Ile Phe Phe Ile Leu Arg Glu Leu Arg Met Lys Ala Pro Met
 385 390 395 400
 Leu Ser Leu Glu Val Leu Lys Tyr Pro Thr Tyr Thr Leu Thr Thr Ile
 405 410 415
 Ile Asn Met Ile Val Met Met Ser Leu Tyr Gly Gly Met Ile Leu Leu
 420 425 430
 Pro Leu Tyr Leu Gln Asn Leu Arg Gly Phe Ser Ala Leu Asp Ser Gly
 435 440 445
 Leu Leu Leu Leu Pro Gly Ala Leu Val Met Gly Ala Leu Gly Pro Val
 450 455 460
 Ala Gly Lys Leu Leu Asp Thr Ile Gly Ile Lys Pro Leu Ala Ile Phe
 465 470 475 480
 Gly Ile Gly Ile Met Thr Tyr Ala Thr Trp Glu Leu Ser Lys Leu Asn
 485 490 495
 Met Asp Thr Thr Tyr Leu His Ile Met Trp Ile Tyr Ile Val Arg Ser
 500 505 510
 Phe Gly Met Ala Phe Val Met Met Pro Ile Ile Thr Ala Gly Met Asn
 515 520 525
 Ala Leu Pro Pro Arg Leu Ile Ser His Gly Asn Ala Phe Val Asn Thr
 530 535 540
 Met Arg Gln Leu Ala Gly Ser Ile Gly Thr Ala Ile Leu Val Thr Val
 545 550 555 560
 Met Thr Thr Gln Gln Thr Asn His Leu Ser Ala Phe Gly Glu Glu Leu
 565 570 575
 Asp Lys Thr Asn Pro Val Ile Gln Asp His Met Arg Glu Leu Ala Gln
 580 585 590
 Gln Tyr Gly Gly Glu Ser Ala Ala Met Lys Leu Leu Leu Glu His Val
 595 600 605
 Asn Lys Leu Ala Ser Val Glu Gly Val Asn Asp Ala Phe Ile Val Ala
 610 615 620
 Thr Ile Ile Ser Ala Ile Ala Leu Ile Leu Ser Leu Phe Leu Gln Gly
 625 630 635 640
 Lys Lys Lys Ala Gln Leu Ser Ala Glu Lys Ala Asn Ala Glu Asp Tyr
 645 650 655
 Pro Ser Gln Gln Asp Lys
 660

<210> 5137

<211> 221

<212> PRT

<213> S.epidermidis

<400> 5137

Val Lys His Leu Arg Leu Ile Gly Leu Pro His Lys Asn Lys Asn Thr
 1 5 10 15
 Tyr Val Asn Leu Ile Leu Arg Val Ser Leu Met Lys Ala Tyr Leu Tyr

```
<210> 5138
<211> 55
<212> PRT
<213> S.epidermidis
```

```
<210> 5139
<211> 72
<212> PRT
<213> S.epidermidis
```

```

<400> 5139
Val His Leu Leu Arg Ser Ser Ile Leu Ala Leu Leu His Leu Ser Cys
1          5          10          15
Val Val Ala Leu Leu Phe Ile Lys Val Ser Asn Tyr Ile Leu His Glu
          20          25          30
Ile Gln Ile Phe Asn Ile Pro His Phe Leu Phe His Ile Asn His Phe
          35          40          45
Ile Leu Leu Leu Asn Tyr Leu Tyr Gln His Leu Ile Ile Thr Tyr Lys
          50          55          60
Leu Lys Gly Arg Asp Ile His Asp

```

65

70

<210> 5140

<211> 341

<212> PRT

<213> S.epidermidis

<400> 5140

Lys Gly Asp Tyr Val Met Ile Ser Lys Val Glu His Gln Arg His Gly
 1 5 10 15
 Leu Asp Leu Ile Lys Ile Asp Asn Asp Thr Lys Ile Val Phe Thr
 20 25 30
 Asn Tyr Gly Ala Arg Ile Val Ser Trp Lys Tyr His Asp Asn Asn Ile
 35 40 45
 Val Leu Gly Asn Val Val Glu Ala Asp Glu Phe Tyr Phe Glu Glu Pro
 50 55 60
 Phe Asn Phe Gly Ala Thr Ile Gly Arg Tyr Ala Gly Arg Ile Glu Asn
 65 70 75 80
 Ala Ser Phe Lys Leu Asp Asp Asp Thr Phe Gln Leu Glu Ser Asn Asp
 85 90 95
 Gly Gln His His Leu His Gly Gly Ser His Gly Leu Asn Arg Arg Ile
 100 105 110
 Phe Asp Tyr Glu Ile Val Asp Asp Ile Gly Gln Val Lys Ile Ile Phe
 115 120 125
 Thr Thr Thr Ile Lys Glu Glu Glu Asp Asn Tyr Pro Gly Asp Met Met
 130 135 140
 Val Lys Val Ile His Thr Tyr Asp Ala Asn His Arg Trp Ser Val Gln
 145 150 155 160
 Tyr Glu Ala Lys Ser Thr Lys Lys Thr Val Phe Asn Pro Ser Asn His
 165 170 175
 Val Tyr Phe Asn Leu Asn Arg Asp Asn Asn Val Val Tyr Asn His Cys
 180 185 190
 Ile Asn Ser Ser Ala Leu Lys Met Tyr Met Leu Asn Asn Lys His Ile
 195 200 205
 Val Lys Glu Gly Gln Ser Leu Asp Leu His Arg Leu Leu Asp Thr Asn
 210 215 220
 Lys Val Tyr Leu Lys Asp Ile Phe Glu Ser Asp Asn Glu Thr Leu Gln
 225 230 235 240
 Gln Gln Ile Asn His Tyr Asn Gly Ile Asp His Pro Phe Glu Phe Gly
 245 250 255
 Gly Asn Glu Leu Thr Ile Asp Asn Ser Glu Phe Glu Leu Asn Ile Lys
 260 265 270
 Thr Asp Met Pro His Phe Val Met Phe Thr Phe Asn Asp Pro Gln Val
 275 280 285
 Trp Asn Asn Asp Phe Asn Ile Tyr Lys Ala His Ser Gly Phe Ser Ile
 290 295 300
 Glu Thr Gln Tyr Met Pro Asn Asp Ile Asn Met Tyr Gly Ala Lys Ala
 305 310 315 320
 Gln Ser Ile Leu Glu Ala Asp Thr Leu Phe Thr Ser Lys Thr Ser Phe
 325 330 335
 Gln Ile His Glu Lys
 340

<210> 5141

<211> 51

<212> PRT

6566778899
 101112131415
 161718192021
 222324252627
 282930313233
 343536373839
 404142434445
 464748495051
 525354555657
 585960616263
 646566676869
 707172737475
 767778798081
 828384858687
 888990919293
 949596979899
 100101102103104
 105106107108109
 110111112113114
 115116117118119
 120121122123124
 125126127128129
 130131132133134
 135136137138139
 140141142143144
 145146147148149
 150151152153154
 155156157158159
 160161162163164
 165166167168169
 170171172173174
 175176177178179
 180181182183184
 185186187188189
 190191192193194
 195196197198199
 200201202203204
 205206207208209
 210211212213214
 215216217218219
 220221222223224
 225226227228229
 230231232233234
 235236237238239
 240241242243244
 245246247248249
 250251252253254
 255256257258259
 260261262263264
 265266267268269
 270271272273274
 275276277278279
 280281282283284
 285286287288289
 290291292293294
 295296297298299
 300301302303304
 305306307308309
 310311312313314
 315316317318319
 320321322323324
 325326327328329
 330331332333334
 335336337338339
 340341342343344
 345346347348349
 350351352353354
 355356357358359
 360361362363364
 365366367368369
 370371372373374
 375376377378379
 380381382383384
 385386387388389
 390391392393394
 395396397398399
 400401402403404
 405406407408409
 410411412413414
 415416417418419
 420421422423424
 425426427428429
 430431432433434
 435436437438439
 440441442443444
 445446447448449
 450451452453454
 455456457458459
 460461462463464
 465466467468469
 470471472473474
 475476477478479
 480481482483484
 485486487488489
 490491492493494
 495496497498499
 500501502503504
 505506507508509
 510511512513514
 515516517518519
 520521522523524
 525526527528529
 530531532533534
 535536537538539
 540541542543544
 545546547548549
 550551552553554
 555556557558559
 560561562563564
 565566567568569
 570571572573574
 575576577578579
 580581582583584
 585586587588589
 590591592593594
 595596597598599
 600601602603604
 605606607608609
 610611612613614
 615616617618619
 620621622623624
 625626627628629
 630631632633634
 635636637638639
 640641642643644
 645646647648649
 650651652653654
 655656657658659
 660661662663664
 665666667668669
 670671672673674
 675676677678679
 680681682683684
 685686687688689
 690691692693694
 695696697698699
 700701702703704
 705706707708709
 710711712713714
 715716717718719
 720721722723724
 725726727728729
 730731732733734
 735736737738739
 740741742743744
 745746747748749
 750751752753754
 755756757758759
 760761762763764
 765766767768769
 770771772773774
 775776777778779
 780781782783784
 785786787788789
 790791792793794
 795796797798799
 800801802803804
 805806807808809
 810811812813814
 815816817818819
 820821822823824
 825826827828829
 830831832833834
 835836837838839
 840841842843844
 845846847848849
 850851852853854
 855856857858859
 860861862863864
 865866867868869
 870871872873874
 875876877878879
 880881882883884
 885886887888889
 890891892893894
 895896897898899
 900901902903904
 905906907908909
 910911912913914
 915916917918919
 920921922923924
 925926927928929
 930931932933934
 935936937938939
 940941942943944
 945946947948949
 950951952953954
 955956957958959
 960961962963964
 965966967968969
 970971972973974
 975976977978979
 980981982983984
 985986987988989
 990991992993994
 995996997998999
 10001001100210031004
 10051006100710081009
 10101011101210131014
 10151016101710181019
 10201021102210231024
 10251026102710281029
 10301031103210331034
 10351036103710381039
 10401041104210431044
 10451046104710481049
 10501051105210531054
 10551056105710581059
 10601061106210631064
 10651066106710681069
 10701071107210731074
 10751076107710781079
 10801081108210831084
 10851086108710881089
 10901091109210931094
 10951096109710981099
 11001101110211031104
 11051106110711081109
 11101111111211131114
 11151116111711181119
 11201121112211231124
 11251126112711281129
 11301131113211331134
 11351136113711381139
 11401141114211431144
 11451146114711481149
 11501151115211531154
 11551156115711581159
 11601161116211631164
 11651166116711681169
 11701171117211731174
 11751176117711781179
 11801181118211831184
 11851186118711881189
 11901191119211931194
 11951196119711981199
 12001201120212031204
 12051206120712081209
 12101211121212131214
 12151216121712181219
 12201221122212231224
 12251226122712281229
 12301231123212331234
 12351236123712381239
 12401241124212431244
 12451246124712481249
 12501251125212531254
 12551256125712581259
 12601261126212631264
 12651266126712681269
 12701271127212731274
 12751276127712781279
 12801281128212831284
 12851286128712881289
 12901291129212931294
 12951296129712981299
 13001301130213031304
 13051306130713081309
 13101311131213131314
 13151316131713181319
 13201321132213231324
 13251326132713281329
 13301331133213331334
 13351336133713381339
 13401341134213431344
 13451346134713481349
 13501351135213531354
 13551356135713581359
 13601361136213631364
 13651366136713681369
 13701371137213731374
 13751376137713781379
 13801381138213831384
 13851386138713881389
 13901391139213931394
 13951396139713981399
 14001401140214031404
 14051406140714081409
 14101411141214131414
 14151416141714181419
 14201421142214231424
 14251426142714281429
 14301431143214331434
 14351436143714381439
 14401441144214431444
 14451446144714481449
 14501451145214531454
 14551456145714581459
 14601461146214631464
 14651466146714681469
 14701471147214731474
 14751476147714781479
 14801481148214831484
 14851486148714881489
 14901491149214931494
 14951496149714981499
 15001501150215031504
 15051506150715081509
 15101511151215131514
 15151516151715181519
 15201521152215231524
 15251526152715281529
 15301531153215331534
 15351536153715381539
 15401541154215431544
 15451546154715481549
 15501551155215531554
 15551556155715581559
 15601561156215631564
 15651566156715681569
 15701571157215731574
 15751576157715781579
 15801581158215831584
 15851586158715881589
 15901591159215931594
 15951596159715981599
 16001601160216031604
 16051606160716081609
 16101611161216131614
 16151616161716181619
 16201621162216231624
 16251626162716281629
 16301631163216331634
 16351636163716381639
 16401641164216431644
 16451646164716481649
 16501651165216531654
 16551656165716581659
 16601661166216631664
 16651666166716681669
 16701671167216731674
 16751676167716781679
 16801681168216831684
 16851686168716881689
 16901691169216931694
 16951696169716981699
 17001701170217031704
 17051706170717081709
 17101711171217131714
 17151716171717181719
 17201721172217231724
 17251726172717281729
 17301731173217331734
 17351736173717381739
 17401741174217431744
 17451746174717481749
 17501751175217531754
 17551756175717581759
 17601761176217631764
 17651766176717681769
 17701771177217731774
 17751776177717781779
 17801781178217831784
 17851786178717881789
 17901791179217931794
 17951796179717981799
 18001801180218031804
 18051806180718081809
 18101811181218131814
 18151816181718181819
 18201821182218231824
 18251826182718281829
 18301831183218331834
 18351836183718381839
 18401841184218431844
 18451846184718481849
 18501851185218531854
 18551856185718581859
 18601861186218631864
 18651866186718681869
 18701871187218731874
 18751876187718781879
 18801881188218831884
 18851886188718881889
 18901891189218931894
 18951896189718981899
 19001901190219031904
 19051906190719081909
 19101911191219131914
 19151916191719181919
 19201921192219231924
 19251926192719281929
 19301931193219331934
 19351936193719381939
 19401941194219431944
 19451946194719481949
 19501951195219531954
 19551956195719581959
 19601961196219631964
 19651966196719681969
 19701971197219731974
 19751976197719781979
 19801981198219831984
 19851986198719881989
 19901991199219931994
 19951996199719981999
 20002001200220032004
 20052006200720082009
 20102011201220132014
 20152016201720182019
 20202021202220232024
 20252026202720282029
 20302031203220332034
 20352036203720382039
 20402041204220432044
 20452046204720482049
 20502051205220532054
 20552056205720582059
 20602061206220632064
 20652066206720682069
 20702071207220732074
 20752076207720782079
 20802081208220832084
 20852086208720882089
 20902091209220932094
 20952096209720982099
 21002101210221032104
 21052106210721082109
 21102111211221132114
 21152116211721182119
 21202121212221232124
 21252126212721282129
 21302131213221332134
 21352136213721382139
 21402141214221432144
 21452146214721482149
 21502151215221532154
 21552156215721582159
 21602161216221632164
 21652166216721682169
 21702171217221732174
 21752176217721782179
 21802181218221832184
 21852186218721882189
 21902191219221932194
 21952196219721982199
 22002201220222032204
 22052206220722082209
 22102211221222132214
 22152216221722182219
 22202221222222232224
 22252226222722282229
 22302231223222332234
 22352236223722382239
 22402241224222432244
 22452246224722482249
 22502251225222532254
 22552256225722582259
 22602261226222632264
 22652266226722682269
 22702271227222732274
 22752276227722782279
 22802281228222832284
 22852286228722882289
 22902291229222932294
 22952296229722982299
 23002301230223032304
 23052306230723082309
 23102311231223132314
 23152316231723182319
 23202321232223232324
 23252326232723282329
 23302331233223332334
 23352336233723382339
 23402341234223432344
 23452346234723482349
 23502351235223532354
 23552356235723582359
 23602361236223632364
 23652366236723682369
 23702371237223732374
 23752376237723782379
 23802381238223832384
 23852386238723882389
 23902391239223932394
 23952396239723982399
 24002401240224032404
 24052406240724082409
 24102411241224132414
 24152416241724182419
 242024212422242

<213> S.epidermidis

<400> 5141

Tyr Lys Ile Tyr Gln Ser Ile Ile Arg Glu Ser Arg Leu Asp Tyr Glu
 1 5 10 15
 Arg Asp Glu Glu Trp Gln Cys Leu Gly Ile Asn Ser Phe Ile Val Ile
 20 25 30
 Cys Leu Thr Ile Ser Arg Cys Trp Tyr Tyr Phe Leu Val Ile Leu Pro
 35 40 45
 Leu Cys His
 50

<210> 5142

<211> 49

<212> PRT

<213> S.epidermidis

<400> 5142

Ile Asp Arg Tyr Glu Lys Ala Ser Pro Met Ile Lys Val Ser Asn Val
 1 5 10 15
 Ile Thr Gly Leu Ala Tyr Leu Tyr Ile Leu Ile Leu Lys Ile Lys Ser
 20 25 30
 Asn Thr Lys Ile Lys Leu Leu Glu Cys Glu Ser Leu Thr Gln Asp Leu
 35 40 45
 Phe

<210> 5143

<211> 110

<212> PRT

<213> S.epidermidis

<400> 5143

Gly Gly Arg Tyr Met Asn Val Gln Phe Lys Lys Gly Ala Leu Glu Leu
 1 5 10 15
 Ile Val Leu Leu Ile Ile Lys Lys Glu Asp Gln Tyr Gly Tyr Ser Leu
 20 25 30
 Val Gln Asn Ile Ser Arg Tyr Met Thr Ile Ala Glu Gly Thr Val Tyr
 35 40 45
 Pro Leu Leu Arg Arg Leu Val Lys Ser Gly Glu Leu Ser Thr Tyr Tyr
 50 55 60
 Gln Pro Ser Thr Glu Gly Pro Ser Arg Lys Tyr Tyr Gln Leu Thr Gln
 65 70 75 80
 Gln Gly Ala Ala Arg Val Asn Gln Leu Glu Glu Asp Trp Lys Leu Phe
 85 90 95
 Thr Glu Ala Val Glu His Phe Ile Glu Glu Ser Glu Asn Glu
 100 105 110

<210> 5144

<211> 49

<212> PRT

<213> S.epidermidis

<400> 5144

Cys Phe Leu Tyr Thr Gln Leu Ser Cys Thr Phe Asn His Arg Lys Ser
 1 5 10 15

Glu Ile Thr Ser Ile Tyr Lys Ile Met Ser Ile Asn Val Glu Arg Ala
 20 25 30
 Glu Arg Asn Ile Glu Glu Leu Phe Pro Lys Tyr Ala His Leu Asp Asp
 35 40 45
 Ile

<210> 5145
 <211> 61
 <212> PRT
 <213> S.epidermidis

<400> 5145
 Thr Arg Ser Tyr Pro Trp Tyr Asp Phe Gly His Thr Ile Phe Trp Tyr
 1 5 10 15
 Leu Arg Gly Trp Leu Tyr Lys Ala Thr Ala Phe Met Asp Ser Asp Ala
 20 25 30
 Tyr Ser Ser Ile Asn Ser Gly Tyr Cys Gly Phe Ile Arg Asn Lys Ile
 35 40 45
 Thr Tyr Tyr Ile Thr Ser Ile Arg Gly Asp Val Ile Ile
 50 55 60

<210> 5146
 <211> 324
 <212> PRT
 <213> S.epidermidis

<400> 5146
 Phe Ile Lys Tyr Glu Gly Val Arg Lys Met Thr Val Thr Val Arg Phe
 1 5 10 15
 Gln Ser Leu Ser Gln Pro Leu Thr Leu Val Ser Asn Val Lys Glu Ile
 20 25 30
 Pro Lys Asp Ala Thr Ile Ile Trp Tyr Asp Phe Glu Asn Ala Thr Asp
 35 40 45
 Glu Glu Asn Glu Tyr Leu Lys Asn His Phe Asp Phe Asn Tyr Leu Glu
 50 55 60
 Ile Asp Asp Ala Ile Asn Gly Asp Pro Arg Val Lys Tyr Ile Glu Tyr
 65 70 75 80
 Asp Ala Tyr Gln Tyr Met Ile Phe His Ser Ile Ile Asn Asp Asp Tyr
 85 90 95
 Ser Pro Ile Ser Leu Ser Val Phe Leu Glu Gly Asn Val Leu Val Thr
 100 105 110
 Tyr His His Lys His Phe Pro Ser Leu Lys Arg Val Ala Gln Tyr Asn
 115 120 125
 Ala Glu Asn His Asp Ser Glu Leu Asp Cys Ala Asp Ile Val Ile His
 130 135 140
 Ile Leu Asp Cys Met Val Asp Lys Tyr Phe Asn Phe Val Tyr Gly Ile
 145 150 155 160
 Glu Asp Lys Val Tyr Asn Phe Glu Ala Lys His Val Asp Asp Arg Tyr
 165 170 175
 Ser Lys Ser Val Met Glu Asn Val Phe Gln Leu Arg Ser Asp Leu Ile
 180 185 190
 Lys Ile Lys Arg Val Leu Phe Pro Met Gln Glu Val Val Asp Thr Met
 195 200 205
 Lys Gln Glu Gly Asn Ile Ile Lys Asp Ala Lys His Arg Met Tyr Ile
 210 215 220

```
<210> 5147
<211> 43
<212> PRT
<213> S.epidermidis
```

```
<210> 5148
<211> 42
<212> PRT
<213> S.epidermidis
```

```
<210> 5149
<211> 387
<212> PRT
<213> S.epidermidis
```

<400> 5149															
Trp	Arg	Leu	His	Thr	Met	Lys	Asn	Ser	Arg	Phe	Ser	Gly	Phe	Gln	Trp
1				5					10					15	
Ala	Met	Met	Val	Phe	Val	Phe	Phe	Val	Ile	Thr	Met	Ala	Leu	Ser	Val
			20					25					30		
Ile	Leu	Arg	Asp	Phe	Gln	Ala	Thr	Ile	Gly	Val	Lys	Arg	Phe	Val	Phe
		35					40					45			
Ser	Ile	Lys	Asp	Leu	Ala	Pro	Phe	Ile	Ala	Ala	Ile	Val	Cys	Ile	Leu
	50					55					60				
Val	Phe	Lys	His	Arg	Lys	Glu	Gln	Leu	Ala	Gly	Leu	Lys	Phe	Ser	Ile

```
<210> 5150
<211> 228
<212> PRT
<213> S.epidermidis
```

<400> 5150
Glu Arg Lys His Met Ile Asn Cys Leu Ile Val Asp Asp Asp Lys Lys
1 5 10 15
Leu Leu Gln Tyr Val Ser Ser His Leu Glu Arg Glu Ser Ile Gln Thr
20 25 30
His Thr Phe Thr Ser Gly Glu Ala Ser Leu Asp Phe Leu Glu Asn Lys
35 40 45
Asn Val Asp Ile Ala Ile Val Asp Ile Met Met Ser Gly Met Asp Gly
50 55 60

Phe Glu Leu Cys Gln Thr Leu Lys Asp Asp Tyr His Ile Pro Val Ile
 65 70 75 80
 Met Leu Thr Ala Arg Asp Ala Leu Ser Asp Lys Glu Arg Ala Phe Leu
 85 90 95
 Ser Gly Thr Asp Asp Tyr Val Thr Lys Pro Phe Glu Val Lys Glu Leu
 100 105 110
 Leu Phe Arg Ile Lys Ala Val Leu Arg Arg Tyr Gln Ile Asn Ala Asp
 115 120 125
 Asn Glu Leu Gln Leu Gly Asn Leu Ile Leu Asn Gln Ser Tyr Met Glu
 130 135 140
 Ile Thr Val Gly Ser Lys Thr Met Asn Leu Pro Asn Lys Glu Phe Gln
 145 150 155 160
 Leu Leu Phe Leu Leu Ala Ser Asn Pro Lys His Ile Phe Thr Arg Asp
 165 170 175
 Asp Ile Ile Glu Lys Ile Trp Gly Phe Asp Tyr Glu Gly Asp Asp Arg
 180 185 190
 Thr Val Asp Val His Ile Lys Arg Leu Arg Gln Arg Leu Ser Lys Leu
 195 200 205
 Lys Ser Ser Val Ser Ile Gln Thr Val Arg Gly Gln Gly Tyr Arg Val
 210 215 220
 Asp Gln Asn Val
 225

<210> 5151

<211> 236

<212> PRT

<213> S.epidermidis

<400> 5151

Arg Gly Glu Gln Arg His Met Lys Asp Ala Lys Glu Leu Lys Leu Met
 1 5 10 15
 Thr Leu Glu Asp Val Leu Ser Gln Ile Glu Asn Gly Met Thr Ile Gly
 20 25 30
 Ile Gly Thr Gly Ser Thr Ile Glu Leu Leu Ile Pro Gln Ile Ala Glu
 35 40 45
 Leu Ile Gln Gln Lys Asn Tyr Thr Ile Thr Gly Val Cys Thr Ser Asn
 50 55 60
 Lys Thr Ala Phe Leu Ala Lys Glu Leu Ala Met Asn Ile Val Asp Val
 65 70 75 80
 Asn Asp Val Glu Lys Ile Asp Leu Ala Ile Asp Gly Ala Asp Glu Val
 85 90 95
 Asp Ser Ala Leu Asn Leu Ile Lys Gly Gly Gly Gly Ala Leu Phe Arg
 100 105 110
 Glu Lys Val Ile Asp Glu Met Ala Asp Arg Phe Val Val Val Asp
 115 120 125
 Glu Ser Lys Leu Val Asn Tyr Leu Gly Glu Thr Phe Ala Leu Pro Val
 130 135 140
 Glu Val Asp Lys Phe Asn Trp Tyr Gln Val Ala Lys Lys Ile Glu Arg
 145 150 155 160
 Thr Tyr Asp Ile His Val Ser Arg Arg Val Asn Glu Asp Val Pro Phe
 165 170 175
 Ile Thr Asp Asn Gly Asn Tyr Ile Leu Asp Cys Ser Leu Gln Asn Arg
 180 185 190
 Ile Pro Ala Tyr Glu Leu His Glu Phe Leu Ile His Leu Thr Gly Val
 195 200 205
 Leu Glu Thr Gly Tyr Phe Leu Asp Ile Ala Asp Gln Val Ile Val Gly

210 215 220
 Thr Gln Glu Gly Val Lys Ile Leu Asn Lys Glu Thr
 225 230 235

<210> 5152
 <211> 145
 <212> PRT
 <213> S.epidermidis

<400> 5152
 Lys Thr Glu Gln Asn Phe Tyr Met Lys Gly Gly Val Leu Val Leu Lys
 1 5 10 15
 Ile Met Ser Lys His Ser Ala Thr Leu Val Ile Met Phe Leu Ile Thr
 20 25 30
 Leu Leu Pro Ile Phe Gln Tyr Gln Ala Ser Ala His Ala Thr Leu Glu
 35 40 45
 Lys Ser Thr Pro Gln Gln Gln Gly Val Ile Lys Asp Lys Pro Glu Ala
 50 55 60
 Ile Lys Leu Glu Phe Asn Glu Pro Val Asn Thr Lys Tyr Ser Ser Val
 65 70 75 80
 Thr Leu Phe Asp Asp Lys Gly Lys Lys Ile Lys Asp Leu Lys Pro Ile
 85 90 95
 Thr Thr Gly Trp Ser Gln Thr Val Val Phe Ser Ser Glu Gln Ile Val
 100 105 110
 Asn Gly Thr Asn Thr Ile Glu Trp His Thr Val Ser Ala Asp Gly His
 115 120 125
 Glu Val Gly Asp Thr Phe Glu Phe Ser Val Gly Lys Val Arg Leu Lys
 130 135 140
 Met
 145

<210> 5153
 <211> 134
 <212> PRT
 <213> S.epidermidis

<400> 5153
 Ile Met Thr Lys Ile His Phe Glu Ala Pro Ser Pro Glu Asp Tyr Cys
 1 5 10 15
 Asn Leu Arg Ala Asn Ala Gly Met Ser Ser Lys Ser Ile Glu Ala Ala
 20 25 30
 Ile Lys Gly Leu Pro His Ala Cys Phe Asn Val Thr Leu Tyr Glu Asn
 35 40 45
 Asp Met Leu Ile Gly Met Gly Arg Val Ile Gly Asp Gly Gly Thr Val
 50 55 60
 Phe Gln Ile Val Asp Ile Ala Val Lys Asp Ile Tyr Gln Gly Leu Gly
 65 70 75 80
 His Gly Met Thr Ile Met His Glu Ile Met Lys Tyr Ile Glu Ser Val
 85 90 95
 Ala Glu Glu Gly Thr Tyr Val Ser Leu Ile Ala Asp Tyr Pro Ala Asp
 100 105 110
 Gln Leu Tyr Glu Lys Phe Gly Phe Lys Ser Thr Glu Pro Tyr Ser Lys
 115 120 125
 Gly Met Tyr Ile Lys Tyr
 130

<210> 5154
 <211> 66
 <212> PRT
 <213> S.epidermidis

<400> 5154
 Thr Lys Tyr Lys Cys Leu Pro Gln Ser Ile Thr Gln Lys Thr Lys Ile
 1 5 10 15
 Asn Ile Gln Ser Tyr Ile Phe Gly Val Gln His Lys Ser Val Ile Glu
 20 25 30
 Leu Thr Leu Leu Gln Ile Gly Gly Leu Asn Glu Tyr Asp Lys Ile Val
 35 40 45
 Cys His Ser Cys Leu Tyr Asn Ser Asn Met Tyr Cys Leu Cys Asn Leu
 50 55 60
 Ile Thr
 65

<210> 5155
 <211> 61
 <212> PRT
 <213> S.epidermidis

<400> 5155
 Met Lys Tyr Lys Thr Thr Phe Lys Ile Lys Pro Pro Phe Thr Pro Ala
 1 5 10 15
 Lys Asp Leu Ala Ile Phe Ser Lys Ile Ile Thr Lys Thr Leu Ser Lys
 20 25 30
 Leu Leu Leu Lys Lys Leu Val Asn Val Leu His Gln Leu Asp Lys Leu
 35 40 45
 Ile Leu Thr Phe Ile Thr Lys Leu Asn Leu Asn Lys Ile
 50 55 60

<210> 5156
 <211> 44
 <212> PRT
 <213> S.epidermidis

<400> 5156
 Lys Arg His Lys Met His Leu Leu Leu His Pro Met Thr Phe Phe Ser
 1 5 10 15
 Tyr Leu Asn Ile Glu Ile Asn Asp Asn Thr Ser Ser Ile Ile Met Ile
 20 25 30
 Asp Asp Leu Ile Asp Gly Phe Trp Asp Phe Ile Glu
 35 40

<210> 5157
 <211> 537
 <212> PRT
 <213> S.epidermidis

<400> 5157
 Gly Glu Phe Asn Met Leu Val Glu Ser Phe Asn Pro Phe Gly Asn Leu
 1 5 10 15
 Leu Leu Ser Ser Leu Ile Ala Ala Ile Pro Ile Ile Leu Phe Leu Leu
 20 25 30
 Cys Leu Thr Val Phe Lys Met Lys Gly Ile Tyr Ala Ala Ile Thr Thr

		35					40					45				
Leu	Val	Val	Thr	Leu	Leu	Ile	Ala	Ile	Pro	Phe	Phe	Lys	Leu	Pro	Val	
	50					55					60					
Gly	Ile	Ala	Ser	Gly	Ala	Val	Val	Glu	Gly	Phe	Phe	Gln	Gly	Ile	Phe	
65					70					75					80	
Pro	Ile	Gly	Tyr	Ile	Val	Ile	Met	Ala	Val	Leu	Leu	Tyr	Lys	Ile	Thr	
				85					90					95		
Leu	Lys	Ser	Gly	Gln	Phe	Ala	Thr	Ile	Gln	Asp	Ser	Ile	Thr	Ser	Ile	
			100					105					110			
Ser	Gln	Asp	Gln	Arg	Ile	Gln	Leu	Leu	Leu	Ile	Gly	Phe	Ser	Phe	Asn	
		115					120					125				
Ala	Phe	Leu	Glu	Gly	Ala	Ala	Gly	Phe	Gly	Val	Pro	Ile	Ala	Ile	Cys	
	130					135					140					
Ala	Leu	Leu	Leu	Ala	Gln	Leu	Gly	Phe	Arg	Pro	Leu	Gln	Ala	Ala	Met	
145					150					155					160	
Leu	Cys	Leu	Val	Ala	Asn	Ala	Ala	Ser	Gly	Ala	Phe	Gly	Ala	Ile	Gly	
				165					170					175		
Ile	Pro	Val	Gly	Val	Val	Asn	Thr	Leu	Asn	Leu	Pro	Gly	His	Val	Glu	
			180					185					190			
Ala	Met	Gly	Val	Ser	Gln	Thr	Ser	Thr	Leu	Thr	Leu	Ala	Ile	Ile	Asn	
		195					200					205				
Phe	Phe	Ile	Pro	Phe	Leu	Leu	Ile	Phe	Ile	Val	Asp	Gly	Phe	Lys	Gly	
	210					215					220					
Ile	Lys	Glu	Thr	Leu	Pro	Ser	Ile	Leu	Val	Val	Ser	Val	Thr	Tyr	Thr	
225					230					235					240	
Val	Leu	Gln	Gly	Leu	Leu	Thr	Val	Phe	Asn	Gly	Pro	Glu	Leu	Ala	Asp	
				245					250					255		
Ile	Ile	Pro	Ser	Leu	Ala	Ser	Met	Leu	Ala	Leu	Ala	Leu	Phe	Ser	Lys	
			260					265					270			
Lys	Phe	Gln	Pro	Lys	Asn	Ile	Phe	Arg	Val	Gln	Lys	Asp	Val	Lys	Pro	
		275					280					285				
Glu	Ala	Pro	Lys	Lys	Leu	Lys	Gly	Lys	Glu	Ile	Leu	Phe	Ala	Trp	Ser	
	290					295					300					
Pro	Phe	Ile	Ile	Leu	Thr	Val	Ile	Val	Met	Ile	Trp	Ser	Ala	Pro	Ser	
305					310					315					320	
Phe	Lys	Ala	Leu	Phe	Ala	Pro	Lys	Gly	Lys	Leu	Ser	Ala	Leu	Val	Ala	
				325					330				335			
Asn	Phe	Asp	Leu	Pro	Gly	Thr	Phe	Ser	Asn	Ile	Ser	His	Lys	Pro	Ile	
			340					345					350			
Thr	Leu	Ser	Leu	Asn	Leu	Ile	Gly	Gln	Thr	Gly	Thr	Ala	Ile	Leu	Ile	
		355					360					365				
Thr	Ile	Ile	Ile	Thr	Val	Leu	Met	Ala	Lys	Lys	Val	Asn	Phe	Gly	Asp	
	370					375					380					
Ala	Gly	Arg	Leu	Phe	Val	Glu	Ala	Phe	Lys	Glu	Leu	Trp	Leu	Pro	Ile	
385					390											

2080

				485					490					495	
Ile	Ala	Thr	Ala	Ala	Val	Lys	Glu	Val	Gly	Lys	Glu	Ser	Glu	Leu	Leu
			500					505					510		
Lys	Met	Thr	Leu	Arg	Tyr	Ser	Ile	Gly	Leu	Leu	Val	Phe	Ile	Cys	Ile
		515					520					525			
Trp	Thr	Phe	Ile	Leu	Ser	Phe	Ile	Leu							
	530					535									

```
<210> 5158
<211> 40
<212> PRT
<213> S.epidermidis
```

```

<400> 5158
Asn Cys Val Lys Ile Leu Ser Leu Tyr Tyr Asp Ser Thr Ala Val Leu
1          5          10          15
Phe Val Phe Leu Arg Glu Ser Thr Lys Val Thr Thr Thr Glu Thr Thr
          20          25          30
Asn Ala Ile Ser Ile Pro Ile Lys
          35          40

```

```
<210> 5159
<211> 74
<212> PRT
<213> S.epidermidis
```

```
<400> 5159
Asn Asn Pro Asn Lys Leu Glu Glu Leu Pro Leu Ala Pro Leu Leu Ser
1           5          10         15
Ser Ile Ala Ile Glu Asn Pro Asn Val Ala Ile Pro Val Thr Gly Ala
      20           25          30
Thr Lys Ile Thr Lys Pro Gln Glu Ser Ile Gln Lys Val Gln Trp Leu
      35           40          45
Ser Lys Val Ser Asp Thr Ile Ile Thr Pro Ile Thr Cys Ile Val Asp
      50           55          60
Met Ile Leu Ser Asn Ser Asn Leu Ser Ile
65           70
```

```
<210> 5160
<211> 58
<212> PRT
<213> S.epidermidis
```

```

<400> 5160
Ile Lys Pro Asn Tyr Asn Arg His Lys Ile Lys Lys Ile Asn Leu Val
1          5          10          15
Asn Leu His Leu Lys Glu Ala Phe Lys Cys Leu Lys His Tyr Lys Thr
          20          25          30
Lys Asp Asn Ser Thr Leu Asn Leu Asn Ile Lys Arg Ser Ile Val Glu
          35          40          45
Lys Asp Met Val Lys Arg Asn Ala His Gly
          50          55

```

```
<210> 5161
<211> 51
<212> PRT
```

<213> S.epidermidis

<400> 5161

```

Arg Ile Ile Lys Ile Asp Trp Ile Leu Ser Asn Ile Gln Asn Ile Leu
1           5           10           15
Leu Lys Gly Arg Ser Lys Leu Glu Lys Ser Val Ser Val Arg Lys Ser
          20           25           30
Ile Ile Thr Phe Tyr Cys Tyr Phe Arg Phe Ile Asn Ser Ile Trp Pro
          35           40           45
Ile Gly Tyr
          50

```

<210> 5162

<211> 214

<212> PRT

<213> S.epidermidis

<400> 5162

```

Arg Cys Val Asn Lys Lys Tyr Thr Asn Ile Phe Asn Asn Cys Val Gly
1           5           10           15
Leu Gln Phe Ile Tyr Leu Asn Phe Leu Phe Asp Leu Gly Glu Tyr Met
          20           25           30
Lys Gln Arg Ala Lys Tyr Lys Ile Ile Lys Ser Leu Ile Glu Leu Leu
          35           40           45
Glu Tyr Tyr Pro Phe Asp Glu Ile Thr Ile Lys Met Ile Cys Ala Tyr
          50           55           60
Ser Gly Val Asn Arg Ser Thr Phe Tyr Asp His Phe Gln Asp Lys Tyr
65          70          75          80
Gln Leu Leu Asp Lys Ile Gln Asn Tyr His Leu Asn Lys Tyr Ile Ser
          85           90           95
Leu Leu Gln Ser Phe Tyr Asn Asp Phe His His Ile Lys Thr Asp Gln
          100          105          110
Lys Lys Leu Tyr Lys Phe Phe Leu Leu Ile Ala Lys Tyr Ile Lys Arg
          115          120          125
Lys Glu Ala Phe Tyr Arg Ala Thr Leu Val Thr Tyr Pro Asn Lys Asp
          130          135          140
Ile Ala Leu Asp Tyr Ile Asn Ala Thr Lys Thr Cys Tyr Glu Lys Val
145          150          155          160
Met Asn Arg Tyr Glu Thr Ser Ile Asn Asn Lys Arg Met Phe Ile Ile
          165          170          175
Tyr Ser Val Gly Gly Gln Ala Gly Val Phe Ile Asp Trp Leu Arg Asn
          180          185          190
Gly Cys Ile Glu Ser Pro Gln Glu Val Ala Gln Val Leu Leu Ala Asn
          195          200          205
Thr Ile Lys Leu Gln Arg
          210

```

<210> 5163

<211> 52

<212> PRT

<213> S.epidermidis

<400> 5163

```

Leu Val Gln Asn Asn Leu Lys Ala Cys Val Asn Leu Thr Phe Ser Leu
1           5           10           15
Ile Arg Tyr Thr Pro Phe His Phe Val Ile Lys Thr Ser Val Leu Asn

```

```
<210> 5164
<211> 186
<212> PRT
<213> S.epidermidis
```

```
<210> 5165
<211> 320
<212> PRT
<213> S.epidermidis
```

<div> <div><400></div> <div>5165</div> </div>															
Leu	Ile	Lys	Asn	Gln	Gly	Gly	Tyr	Ile	Met	Tyr	Gln	Leu	Ala	Gln	Ser
1				5					10					15	
Asn	Leu	Trp	Thr	Gly	Arg	Leu	Asp	Ser	Glu	Thr	Asp	Pro	Thr	Gln	Phe
			20					25					30		
Arg	His	Phe	Gln	Thr	Val	Lys	Phe	Gly	Asp	Leu	Ser	Gln	Leu	Asp	Phe
		35					40					45			
Ser	Asp	Glu	His	Lys	Gly	Val	Gly	Leu	Leu	Gly	Tyr	Ala	Ile	Asp	Lys
	50					55					60				
Gly	Val	Glu	Leu	Asn	Lys	Gly	Arg	Val	Gly	Ala	Lys	Glu	Gly	Pro	Asn
65					70					75					80
Ala	Ile	Lys	Arg	Ala	Phe	Ala	Gly	Leu	Pro	Asp	Leu	Asn	Gln	Cys	Glu
				85					90					95	
Glu	Ile	Ile	Asp	Tyr	Gly	Asn	Val	Glu	His	Asn	His	Glu	Leu	Leu	Ile

				100						105					110				
Asp	Thr	Gln	Arg	Glu	Phe	Ala	Asp	Leu	Ala	Ala	Lys	Ser	Ile	Lys	Arg				
		115						120					125						
His	Lys	Gln	Thr	Phe	Leu	Leu	Gly	Gly	Gly	His	Asp	Ile	Ala	Tyr	Ala				
		130					135					140							
Gln	Tyr	Leu	Ala	Thr	Arg	Lys	Val	Tyr	Pro	Glu	Ser	Ser	Ile	Gly	Val				
145					150					155					160				
Ile	Asn	Ile	Asp	Ala	His	Phe	Asp	Thr	Arg	Asp	Glu	Gly	Tyr	Ser	Thr				
			165					170					175						
Ser	Gly	Thr	Ser	Phe	Arg	Gln	Ile	Leu	Glu	Glu	Asp	Asp	Asn	Ala	Asp				
		180						185					190						
Tyr	Leu	Val	Leu	Gly	Ile	Ser	Gln	Gly	Gly	Asn	Thr	Gln	Ala	Leu	Phe				
		195					200					205							
Asn	Tyr	Ala	Lys	Glu	Lys	Asp	Ile	Gln	Phe	Val	Tyr	Ala	Asp	Glu	Leu				
		210				215					220								
Leu	His	Gln	Val	Ser	Pro	Pro	Ile	Lys	Asp	Met	Ile	Glu	Arg	Phe	Ile				
225					230				235						240				
His	Asn	His	Asp	Thr	Val	Met	Phe	Thr	Ile	Cys	Met	Asp	Val	Val	Asp				
			245					250					255						
Ser	Ala	Phe	Ala	Pro	Gly	Val	Ser	Ala	Pro	Ala	Val	Leu	Gly	Ile	Tyr				
		260						265				270							
Pro	His	Thr	Val	Phe	Glu	Leu	Ala	Lys	Arg	Val	Ile	Pro	Ser	Glu	Lys				
		275					280					285							
Val	Lys	Ser	Ile	Ser	Ile	Ala	Glu	Met	Asn	Pro	Thr	Tyr	Asp	Ser	Asp				
		290				295				300									
Gln	Arg	Thr	Ala	Lys	Leu	Val	Ala	Asn	Leu	Val	His	His	Cys	Leu	Ile				
305					310					315					320				

<210> 5166

<211> 300

<212> PRT

<213> S.epidermidis

<400> 5166

Leu	Met	Lys	Asn	Arg	Met	Met	Asn	Arg	Val	Val	Asn	Lys	Tyr	Ile	Leu				
1				5					10					15					
His	Asn	Arg	Ser	Ile	Phe	Phe	Ser	Asn	Asp	Asp	Glu	Val	Lys	His	Phe				
		20						25					30						
Leu	Glu	Lys	Arg	Ser	Ile	Glu	Asn	Ser	Lys	Lys	His	Gln	Gln	Pro	Ala				
		35					40					45							
Thr	Leu	Asn	Val	Lys	Ser	Asn	Leu	Asp	Lys	Leu	Thr	Leu	Asn	Asp	Met				
		50				55					60								
Gln	Val	Phe	Arg	Phe	Asn	Phe	Arg	His	Glu	Lys	Asn	Gln	Lys	Ile	Leu				
65					70				75					80					
Tyr	Leu	His	Gly	Gly	Tyr	Asn	Thr	Leu	Gln	Pro	Ser	Pro	Phe	His	Trp				
			85						90				95						
Arg	Leu	Leu	Asp	Lys	Leu	Thr	Leu	Asn	Thr	Leu	His	Glu	Val	Val	Leu				
		100						105					110						
Pro	Ile	Tyr	Pro	Lys	Ser	Pro	Asp	Tyr	His	Tyr	Leu	Glu	Thr	Phe	Lys				
		115					120					125							
Ala	Ile	Arg	Asp	Val	Tyr	Asn	Gln	Leu	Val	Glu	Glu	Val	Gly	Ala	Asn				
		130				135						140							
Asn	Ile	Val	Met	Met	Gly	Asp	Gly	Ser	Gly	Gly	Gly	Leu	Ala	Leu	Ser				
145					150					155				160					
Phe	Val	Gln	Ser	Leu	Ile	Asn	Asp	Asn	Gln	Glu	Val	Pro	Arg	Lys	Leu				
			165						170					175					

Phe Leu Leu Ser Pro Leu Leu Asp Ala Thr Leu Thr Asn Pro Asn Ile
 180 185 190
 Thr Lys Thr Leu Glu Glu Asn Asp Ile Leu Val Ser Arg Phe Gly Val
 195 200 205
 His Gln Leu Met Lys Ser Trp Thr Asn Asp Leu Pro Leu Ser Asp Ala
 210 215 220
 Arg Ile Ser Pro Leu Tyr Gly Thr Leu Lys Gly Leu Pro Pro Ile Tyr
 225 230 235 240
 Met Tyr Gly Gly Gly Arg Glu Ile Leu Ser Pro Asp Met His Ala Phe
 245 250 255
 Thr His Ala Leu Glu Glu Cys Gly Asn Asp Val Glu Phe Lys Glu Tyr
 260 265 270
 Pro Lys Met Val His Asp Phe Pro Ile Tyr Pro Ile Arg Gln Ser His
 275 280 285
 Lys Val Leu Lys His Ile Thr Lys Ser Ile Leu Glu
 290 295 300

<210> 5167

<211> 205

<212> PRT

<213> S.epidermidis

<400> 5167

Leu Ile Val Lys Lys Ile Lys Ala Glu Thr Leu Ser Asp Met Gln Asn
 1 5 10 15
 Tyr Lys Leu Leu Ser Gly Ser Ile Ile Pro Arg Pro Ile Ala Phe Val
 20 25 30
 Thr Thr Gln Asn Leu Lys Gly Asp Ile Asn Ala Ala Pro Phe Ser Phe
 35 40 45
 Phe Asn Val Val Asn His Thr Pro Pro Met Ile Ala Ile Ala Val Gln
 50 55 60
 Arg Thr Lys Gly Asn Arg Lys Asp Thr Ser Ile Asn Ile Glu Gln Ser
 65 70 75 80
 Gly Glu Phe Val Val His Ile Thr Asp Glu Ala Ile Val Asn Asp Val
 85 90 95
 Asn Glu Thr Ala Ala Pro Leu Glu Tyr Gly Val Asn Glu Leu Lys Arg
 100 105 110
 Thr Ser Leu Ser Met Ile Asp Ser Asp Leu Ile Lys Val Pro Ala Ile
 115 120 125
 Lys Glu Ala Lys Val Arg Phe Glu Cys Lys Leu His Gln Ile Val Gln
 130 135 140
 Leu Gly Asn Lys Asp Asn Gly Ser Asp Leu Ile Ile Gly Glu Ile Val
 145 150 155 160
 Val Tyr His Ile Asp Glu Glu Val Tyr Phe Glu Asp Ser Lys Ile Asp
 165 170 175
 Ala Asn Gln Leu Asn Pro Val Ala Arg Leu Ala Gly Asn Asp Tyr Ser
 180 185 190
 Leu Leu Gly Gln Thr Phe Thr Val Asn Arg Pro Thr Ser
 195 200 205

<210> 5168

<211> 240

<212> PRT

<213> S.epidermidis

<400> 5168

Tyr Tyr Ala Leu Phe Asn Ile Leu Ile Glu Ile Gln Phe Asn Met Ile
 1 5 10 15
 Lys Arg Gln Ser Arg Arg Arg Phe Gln Met Lys Lys Val Leu Ala Ser
 20 25 30
 Ala Thr Ile Leu Ser Leu Met Leu Val Gly Cys Ser Asn Gly Gly Asn
 35 40 45
 Asp Glu Ser Ser His Lys Asp Asp Ser Ser Lys Thr Glu Gln Lys Asp
 50 55 60
 Lys Ser Ser Ser Gln His Asp Ser Lys Lys Asp Ser Lys Arg Asn Asp
 65 70 75 80
 Thr Asn Asn Lys Gln Asp Asn Gln Glu Asn Asn Thr Asn Lys Glu Gln
 85 90 95
 Thr Asn Asn Gln Asn Pro Asn Asp Gly Glu Gln Arg Thr Ser Glu Arg
 100 105 110
 Pro Thr Thr Asn Ser Asn Gly Asn Ser Ser Asp Asn Gln Asn Lys Gln
 115 120 125
 Gln Gln Ser Val Gln Asp Asn Gln Asn Lys Tyr Val Ala Pro Tyr Gln
 130 135 140
 Ser Glu Asn Ala Thr Arg Val Ala Arg Cys Leu Ser Pro Phe Glu Gly
 145 150 155 160
 Asp Arg Ser Gln Ala Leu Gln Gln Leu Pro Asn Phe Glu Thr Ala Leu
 165 170 175
 Ser Ile Ala Lys Asn Glu Ala Asn Met Tyr Gly Ser Glu Asn Lys Ser
 180 185 190
 Tyr Asn Asp Tyr Ser Ile Glu Gln Thr Glu Asp Gly Phe Arg Tyr Val
 195 200 205
 Phe Ser Phe Lys Asp Pro Ser Lys Ser Asn Thr Tyr Ser Ile Val Thr
 210 215 220
 Leu Asn Arg Gln Gly Gln Pro Thr Val Val Asp Pro Asn Phe Gln Pro
 225 230 235 240

<210> 5169

<211> 359

<212> PRT

<213> S.epidermidis

<400> 5169

His Ile Lys Lys Trp Glu Arg Ile Ser Met Asn Leu Ala Trp Lys Glu
 1 5 10 15
 Ile Lys Phe Tyr Lys Phe Arg Phe Ile Leu Ile Met Phe Ile Ile Phe
 20 25 30
 Leu Met Ala Ile Met Val Leu Phe Ile Ser Gly Leu Ala Gln Gly Leu
 35 40 45
 Ala Arg Glu Asn Ile Ser Ile Phe Asp Gln Ile Lys Gly Asn Gln Phe
 50 55 60
 Val Val Gln Lys Met Lys Glu Pro Gln Leu Glu Lys Ser Ile Leu Ser
 65 70 75 80
 Arg Ser Lys Gln Asp Asn Ile Ser Lys Ile Ile Asp Glu Lys Pro Phe
 85 90 95
 Lys Met Ala Gly Lys Thr Phe Lys Ile Asn Gly Asn Glu Glu Asn Val
 100 105 110
 Met Ala Ile Asn Ser Val Lys Asn His Gln Pro Asn Leu Lys Ser Gly
 115 120 125
 His Tyr Pro Lys Asn Gly Asn Gln Ile Ala Ile Asn Glu Lys Leu Thr
 130 135 140
 Ala Glu Gly Leu Tyr Leu Asp Asp Lys Val Lys Val Lys Gly Asp Asp

145 150 155 160
 Thr Thr Tyr Lys Val Val Gly Ile Leu Lys Asn Thr Met Tyr Ser His
 165 170 175
 Ser Asn Ile Val Met Met Asp Gln Ser Lys Ile Glu Gln Ser Ser Asn
 180 185 190
 Val Ala Thr Phe Tyr Val Thr Asn Gln Leu Ser Lys Ser Asp Lys Asn
 195 200 205
 Lys Ile Asn His Ile Lys Gly Val Gln Thr Ala Thr Thr Asp Asn Ile
 210 215 220
 Thr Ser Asn Ile Ala Ser Tyr Lys Ala Glu Gln Thr Pro Leu Asp Met
 225 230 235 240
 Met Ile Ile Ser Leu Tyr Ile Ile Thr Ala Ile Val Leu Ser Ala Phe
 245 250 255
 Phe Tyr Val Met Thr Ile Gln Lys Thr Ser Glu Ile Gly Ile Leu Lys
 260 265 270
 Ala Ile Gly Ile Thr Thr Lys His Leu Leu Thr Ser Leu Ile Leu Gln
 275 280 285
 Ile Ser Met Ile Thr Phe Ile Gly Val Ala Ile Ala Glu Val Val Ile
 290 295 300
 Leu Leu Ile Ser Gln Ile Leu Pro Val Ser Met Pro Phe His Ile Asp
 305 310 315 320
 Met His Asn Ile Ile Ile Val Leu Val Ile Phe Met Ile Val Gly Leu
 325 330 335
 Ile Gly Thr Ser Leu Ser Phe Ile Lys Leu Ile Lys Ile Asp Pro Ile
 340 345 350
 Glu Ala Ile Gly Gly Gly Gln
 355

<210> 5170

<211> 61

<212> PRT

<213> S.epidermidis

<400> 5170

Thr Met Asn Leu Ile Glu Phe Ile Asn Asp Leu Ala Lys Asn Asn Ile
 1 5 10 15
 Ile Ile Cys Val Met His Met Ile Ile Ile Ile Tyr Ser Ile Phe Cys
 20 25 30
 His Ser Ser Gly Tyr Gly Lys Cys Leu Val His Leu Phe Asn Leu Leu
 35 40 45
 Ser Tyr Asn Thr Ile Leu Thr Glu Lys Ser Thr Tyr Met
 50 55 60

<210> 5171

<211> 378

<212> PRT

<213> S.epidermidis

<400> 5171

Glu Arg Ala Glu Arg Tyr Met Thr Asn Tyr Ser Thr Tyr Val Asp Trp
 1 5 10 15
 Arg Arg Thr Phe His Gln Tyr Pro Glu Leu Ser Asp Glu Glu Tyr Glu
 20 25 30
 Thr Thr Glu Lys Leu Arg Lys Ile Leu Lys Ser Tyr Gly Ile Arg Ile
 35 40 45
 Leu Glu Val Pro Leu Lys Thr Gly Leu Val Ala Glu Ile Gly Gln Gly

50		55		60
Glu Glu Met Ile Ala Val Arg Thr Asp Ile Asp Ala Leu Pro Ile Glu				
65		70		80
Glu Gln Val Lys His Glu Phe Thr Ser Lys Tyr Gln Gly Ala Met His				
	85		90	95
Ala Cys Gly His Asp Ile His Met Ala Ser Ile Leu Ala Thr Gly Ile				
	100		105	110
Gln Leu Lys Glu Ile Glu Asp Glu Leu Asn Gly Arg Val Arg Leu Ile				
	115		120	125
Phe Gln Pro Ala Glu Glu Leu Gly His Gly Ala Phe Glu Ile Ile Asn				
	130		135	140
Thr Gly Val Leu Lys Gly Ala Lys Ala Val Leu Gly Phe His Asn Tyr				
145		150		160
Pro Thr Leu Lys Val Gly Glu Phe Ala Ile Lys Ser Gly Ala Ile Thr				
	165		170	175
Ser Ala Val Asp Arg Phe Glu Phe Asn Val Lys Gly Lys Gly Ala His				
	180		185	190
Ala Ala Lys Pro Glu Gln Gly Asn Asp Pro Val Ile Val Val Gly Gln				
	195		200	205
Leu Ile Asn Ser Leu Gln Thr Ile Val Ser Arg Asn Leu Ser Ala Phe				
	210		215	220
Asp Ser Ala Val Val Thr Ile Gly Glu Ile Ser Cys Gly Asn Thr Trp				
225		230		240
Asn Val Ile Ala Asp Lys Ala Tyr Ile Gln Gly Thr Val Arg Ser Phe				
	245		250	255
Asp Glu Asp Ile Arg His Tyr Ile Glu Asn Arg Met Lys Asn Ile Ala				
	260		265	270
Asp Gly Leu Ser Arg Val Phe Asn Val Asp Ile Asp Leu Thr Tyr Ser				
	275		280	285
Arg Leu Pro Gly Ala Val Val Asn Asp Ala His Leu Thr Gln Glu Ala				
	290		295	300
Ile Glu Val Ala Lys Asn Val Gly Tyr His Val Ser Met Leu Asp Glu				
305		310		320
Pro Val Thr Ile Gly Glu Asp Phe Ser Gly Tyr Thr Glu Glu Tyr Pro				
	325		330	335
Gly Val Phe Ala Phe Ile Gly Ser Asp Ser Lys Tyr Asp Leu His His				
	340		345	350
Pro Lys Tyr His Pro Asp Glu Arg Ile Leu Glu Lys Val Pro Gln Tyr				
	355		360	365
Phe Val Gln Leu Val Gln Arg Leu Leu Thr				
370		375		

<210> 5172

<211> 286

<212> PRT

<213> S.epidermidis

<400> 5172

Cys Asp Tyr Glu Ile Ser Lys Met Glu Tyr Leu Tyr Cys Gln Arg Lys				
1	5		10	15
Cys Thr Ile Met Lys Lys Ile Ala Ala Ile Ile Phe Leu Ile Gly Leu				
	20		25	30
Ser Leu Ile Ile Ile Cys Ser Val Gly Val Tyr Ala Gln Asn Lys Lys				
	35		40	45
Leu Ser Lys Asp Asn Gln Tyr Asn Asn Gln Thr Thr Asn Leu Met Lys				
50		55		60

Asn Tyr Asp Asp Asn Thr Val Lys Ser Ile Tyr Ile Asp Gly Lys Val
 65 70 75 80
 Ser Asp Ile Thr Val Lys Lys Gly Lys His Phe Ser Val Lys Ser Lys
 85 90 95
 Gly Asn Asp Lys Asn Leu Asn Val Thr Ser Lys Val Asn Asn Gln Arg
 100 105 110
 Trp Val Ile Thr Glu Arg Gln Thr Ser Pro His Ile Asn Phe Arg Ile
 115 120 125
 Gln Gly Lys Val Ser Asn His Ile Thr Ile Thr Val Pro Lys Tyr Ile
 130 135 140
 Lys Asn Ile Asp Ile Lys Thr Asn Ala Gly Asp Leu Asn Ile Val Gly
 145 150 155 160
 Val Asn Ser Gly Thr Gly Arg Phe Asp Ala Glu Ser Gly Asp Ile Lys
 165 170 175
 Val Gln Lys Gly Arg Tyr Lys Lys Val Thr Leu His Asn Glu Asp Gly
 180 185 190
 Asp Ile His Thr Lys Asp Ile His Phe Asn Gln Ala Asn Ile Gln Asn
 195 200 205
 Asp Asn Gly Asp Ile Gln Met Lys Gln Leu Asp Pro Asp Ile Pro Leu
 210 215 220
 Arg Ile Lys Asn Glu Glu Gly Asp Ile Asn Leu Asn Tyr Lys Lys Glu
 225 230 235 240
 Leu His His Thr Gln Ile Ile Thr Arg Asn Glu Glu Gly Glu Thr Asp
 245 250 255
 Ile Asp His Arg Val Leu Tyr Asn Ser Lys Val Glu Asn Gly Asn Asn
 260 265 270
 Lys Val Lys Leu Ile Asn Glu Asn Gly Asp Ile Lys Val Lys
 275 280 285

<210> 5173

<211> 397

<212> PRT

<213> S.epidermidis

<400> 5173

Cys Tyr Asn Asp Leu Asn Ile Ile Glu Asn Asn Glu Val Phe Tyr Ala
 1 5 10 15
 Met Lys Ser Phe Thr Phe Phe Met His Asn Ile Tyr Ala Met Gly Gly
 20 25 30
 Thr Val Lys Ser Val Thr Gln Leu Ala Asn Thr Leu Ala Glu Lys Gly
 35 40 45
 His Pro Val Thr Ile Ile Ser Val Phe Arg Gly Ala Asp Ser Pro Tyr
 50 55 60
 Phe Glu Leu His Ser Ala Ile Lys Val Lys Val Val Val Asp Tyr Arg
 65 70 75 80
 Leu Lys Leu Lys Asn Thr Arg Ala Ile Thr Ala Asn Arg Ile Lys Lys
 85 90 95
 Tyr Thr Pro Phe Leu Asn Thr Lys Val Ile Ser Gln Phe Glu Pro Gly
 100 105 110
 Lys Ser Gln Phe Ser Ser Tyr Val Glu Lys Lys Met Ile Lys Ala Ile
 115 120 125
 Arg His Thr Lys Thr Asp Val Leu Val Gly Thr Arg Ala Ser Phe Asn
 130 135 140
 Ile Leu Ile Ser Lys Tyr Ala Lys Ala Glu Ile Val Thr Ile Ala Met
 145 150 155 160
 Glu His Met Asn Phe Asp Ala His Pro Asp Gln Tyr Gln Lys Glu Ile

```
<210> 5174
<211> 46
<212> PRT
<213> S.epidermidis
```

```
<210> 5175
<211> 460
<212> PRT
<213> S.epidermidis
```

<400> 5175
Glu Val Lys Asp Ile Gly Trp Thr Lys Met Phe Lys Thr Leu Tyr Ser
1 5 10 15
Arg Ile Ala Ile Tyr Ala Ile Thr Val Ile Leu Phe Ser Ala Leu Met
20 25 30
Ser Phe Leu Phe Thr Asn Ile Tyr Tyr His Phe His Leu Lys Ala Ser
35 40 45
Asn Asp Ala Lys Ile Met Arg Thr Leu Lys Glu Ala Arg Glu Tyr Glu

<400> 5176

Leu Ser Ser Leu Leu Ile Leu Val Ile Pro Ser Leu Phe Phe Met Leu
 1 5 10 15
 Tyr Asp Asp Arg Lys Ile His Val Tyr Ser Lys Pro Glu Phe Ile Lys
 20 25 30
 Arg His Gln Val Asn Lys Asn Gln
 35 40

<210> 5177

<211> 41

<212> PRT

<213> S.epidermidis

<400> 5177

Ala Gly Gly Leu Leu Tyr Gly Ile Lys Ile Ile Phe Phe Thr Gln Leu
 1 5 10 15
 Lys Asp Phe Val Phe Met Met Gly Asn Ser Ile His Arg Met Tyr Ile
 20 25 30
 Ser His Phe Phe Trp Leu Gly Leu Ile
 35 40

<210> 5178

<211> 292

<212> PRT

<213> S.epidermidis

<400> 5178

Ile Phe Ser Trp Lys Ser Glu Ala Lys Asp Val Asp Thr Ser Ser Pro
 1 5 10 15
 Phe Tyr Glu Lys Ser Lys Phe Trp Phe Gly Leu Leu Arg Tyr Val Thr
 20 25 30
 Glu Gly Ala Asn Phe Leu Leu Ile Gly Leu Phe Trp Leu Asn Gly Ile
 35 40 45
 Ala Arg Lys Arg Gly Leu Arg Gln Phe Asn Val Leu Pro Lys Gln Ser
 50 55 60
 Gly Ile Ala Trp Ile Met Ala Met Ser Leu Leu Val Ser Leu Val Val
 65 70 75 80
 Tyr Met Met Thr Leu Thr Ser Asp Ile Leu Glu Asp Ile Leu Ser Phe
 85 90 95
 Lys Leu Glu Val Ile Met Gln Phe Pro Tyr Ile Leu Ser Ser Ile Ser
 100 105 110
 Leu Ile Ile Leu Phe Ile Leu Phe Ile Leu Lys Asp Met Glu Lys Ile
 115 120 125
 Trp Tyr Trp Leu Ile Ser Ile Val Met Ile Ala Val Ile Ser Met Ser
 130 135 140
 Gly His Val Trp Ser Gln Val Pro Leu Trp Ser Ile Ile Ile Arg
 145 150 155 160
 Thr Ile His Leu Ile Gly Leu Thr Leu Trp Leu Gly Ser Leu Val Tyr
 165 170 175
 Leu Ile Cys Tyr Ala Ile Lys Val Lys Ile Asn Gln Leu Thr Ser Val
 180 185 190
 Arg Arg Met Leu Leu Lys Val Asn Ile Ile Ala Val Ile Met Leu Val
 195 200 205
 Phe Thr Gly Ile Leu Met Ala Ile Asp Glu Thr Asn Thr Leu Thr Leu
 210 215 220

Trp Asn Asn Val Ser Ala Trp Ser Ile Tyr Leu Val Ile Lys Ile Ala
 225 230 235 240
 Gly Ile Ile Ala Met Met Leu Leu Gly Phe Tyr Gln Thr Met Arg Ala
 245 250 255
 Leu Arg Gln Arg Gln Gln Val His Arg Phe Ala Leu Met Thr Glu Leu
 260 265 270
 Leu Ile Gly Met Ile Leu Ile Phe Ala Gly Ile Met Met Ser Gln Ile
 275 280 285
 Asn Ile Pro Ser
 290

<210> 5179

<211> 54

<212> PRT

<213> S.epidermidis

<400> 5179

Leu Lys Leu Cys Met Leu Lys Ile Leu Tyr Val Ser Thr Tyr Val Asn
 1 5 10 15
 Asn Tyr Leu Asn Asp Ser Tyr His Cys Gly Thr Ser Tyr Ala Ala Met
 20 25 30
 Tyr Asp Cys Ile Asn Ala Asp Met Phe Ile His Phe Asn Phe Asn His
 35 40 45
 Gly Ile Val Asp Ser Asn
 50

<210> 5180

<211> 301

<212> PRT

<213> S.epidermidis

<400> 5180

Ala Ile Trp Trp Tyr Pro Tyr Leu Gly Ala Ala Leu Gly Met Ile Leu
 1 5 10 15
 Val His Pro Gly Leu Met Ser Ala Tyr Asp Phe Pro Lys Ala Val Glu
 20 25 30
 Glu Gly Lys Ala Ile Pro His Trp Asp Val Phe Gly Leu His Ile Asn
 35 40 45
 Glu Val Gly Tyr Gln Gly Gln Val Leu Pro Met Leu Val Ala Thr Tyr
 50 55 60
 Ile Leu Ala Thr Ile Glu Lys Trp Leu Arg Lys Val Ile Pro Thr Val
 65 70 75 80
 Leu Asp Asn Leu Leu Thr Pro Leu Leu Ser Ile Phe Ile Thr Ala Phe
 85 90 95
 Ile Thr Phe Leu Phe Val Gly Pro Val Thr Arg Gln Leu Gly Tyr Trp
 100 105 110
 Leu Ser Asp Gly Leu Thr Trp Leu Tyr Glu Phe Gly Gly Ala Ile Gly
 115 120 125
 Gly Leu Ile Phe Gly Leu Leu Tyr Ala Pro Ile Val Ile Thr Gly Met
 130 135 140
 His His Ile Phe Ile Ala Val Glu Thr Thr Leu Ile Ala Asp Ala Thr
 145 150 155 160
 Lys Thr Gly Gly Ser Phe Ile Phe Pro Ile Ala Thr Met Ser Asn Ile
 165 170 175
 Ala Gln Gly Gly Ala Ala Leu Ala Ala Phe Phe Ile Ile Lys Gln Asn
 180 185 190

Gln Ser Leu

<210> 5183

<211> 229

<212> PRT

<213> S.epidermidis

<400> 5183

```

Ser Tyr Trp Arg Trp Pro Ile Met Gly Leu Val Val Lys Asp Ile Ser
1      5      10      15
Lys Thr Phe Gly Glu Lys Thr Ser Lys Thr Glu Val Leu Lys Asp Ile
20      25      30
Asn Phe Glu Val Lys Asp Gly Glu Phe Ile Ile Leu Asn Gly Ala Ser
35      40      45
Gly Ser Gly Lys Thr Thr Leu Leu Thr Ile Leu Gly Gly Leu Leu Ser
50      55      60
Gln Thr Ser Gly Asp Val Val Tyr Glu Gly Lys Ser Leu Phe Glu Arg
65      70      75      80
His Thr Asn Lys Ala His Leu Arg Leu Asn Asp Ile Gly Phe Ile Phe
85      90      95
Gln Ala Ser His Leu Val Pro Tyr Leu Lys Val Leu Asp Gln Leu Thr
100     105     110
Leu Ile Gly Lys Glu Thr Gly Met Ser Ser Lys Glu Ala Gln Ala Arg
115     120     125
Ala Lys Glu Leu Leu Lys Lys Ile Gly Leu Glu Glu Gln Leu Asn Ser
130     135     140
Tyr Pro His Met Leu Ser Gly Gly Gln Gln Gln Arg Val Ala Ile Met
145     150     155     160
Arg Ala Leu Met Asn His Pro Lys Ile Val Leu Ala Asp Glu Pro Thr
165     170     175
Ala Ser Leu Asp Ala Ser Arg Ala Gln Glu Val Val Glu Met Ile Arg
180     185     190
Lys Gln Ile Lys Ala Asn Gln Met Ile Gly Ile Met Ile Thr His Asp
195     200     205
Glu Ser Leu Phe Lys Tyr Ala Asp Arg Ile Val Gln Leu Tyr Asp Gly
210     215     220
Lys Ile Lys Asn Ser
225

```

<210> 5184

<211> 54

<212> PRT

<213> S.epidermidis

<400> 5184

```

Glu Arg Leu Gly Gly Tyr Phe Tyr Lys Lys Asp Lys Leu Tyr Ile Ile
1      5      10      15
Ser Ile Glu Phe Val Phe Phe Thr Tyr Pro Glu Thr Leu Cys Leu Gly
20      25      30
Ile Ile Asn Lys Arg Asp Asp Ser Arg Ile Lys Arg Thr Leu Lys Ser
35      40      45
Ser Leu Phe Asn Thr Trp
50

```

<210> 5185

<211> 476

<213> S.epidermidis

Glu 1	Ile	Glu	Gly	Arg 5	Phe	Met	Ile	Lys	Gln 10	Ile	Asn	Ile	Ser	Asn 15	Met
Asp	Lys	Leu	Lys 20	Glu	Gln	Met	Glu	Arg 25	Ala	Leu	Ser	Asp	Gly 30	Tyr	Thr
His	Val	Ile	Pro 35	Tyr	Ser	Asn	Glu 40	Ile	Gln	Ile	His	Gln 45	Ser	Met	Ile
Lys	Ala	Ile	Thr 50	Leu	Pro	Lys 55	Thr	Ser	Phe	Ile	Val	Asp 60	Tyr	Thr	Ile
Asn 65	Asn	Tyr	Tyr	Leu	Asn 70	Asp	Cys	Lys	Tyr	Phe	Gly	Leu	Asp	Phe	Val 80
Asp	Phe	Glu	Asp 85	Trp	Val	Lys	Asn	Ile	Asn 90	Leu	Tyr	Pro	Asn 95	Val	Ile
Tyr	Glu	Ile	Asn 100	Ser	Thr	Leu	Glu	Leu 105	Ile	Asp	Lys	Phe	Glu 110	Val	Glu
Asn	Ile	Phe	Asp 115	Leu	Ala	Leu	Leu 120	Thr	Ile	Leu	Lys	Gly 125	His	Ile	Ala
Val	Glu	Gly	His 130	Val	Val	Leu 135	Asp	Phe	Lys	Gly	Pro	Leu	Lys	Thr	Ser
Lys 145	Gly	Phe	Trp	Arg	Ser 150	Phe	Asp	Arg	Asn	Asp	Leu	Thr	Tyr	Arg	Asp 160
Lys	Phe	Phe	Leu	Asn 165	Thr	Ile	Ala	Tyr	Ala	His	Lys	Gln	Arg	Ile	Pro
Phe	Thr	Arg	Val 180	Pro	Phe	Asn	Asp 185	His	Asp	Ser	Ile	Arg	Tyr	Tyr	Asp
Ser	Val	Leu	Leu 195	Ser	Thr	Lys	Phe	Lys	Ala	Pro	Arg	Trp	Leu	Val	Thr
Pro	Ile	Lys	Asn 210	Tyr	Ser	Val	Lys	Lys	His	Lys	Glu	Ile	Ser	Tyr	Ile
Tyr 225	Lys	Lys	Asp	Ser	Ser 230	Lys	Leu	Lys	Asn	His	Val	Val	Phe	Leu	Gly 240
Phe	Asp	Phe	Gly	Tyr 245	Arg	Gly	Asn	Ser	Lys	Tyr	Leu	Phe	Asn	Tyr	Phe
Val	Lys	His	Asn 260	Pro	Met	Ile	Glu	Ser	Tyr	Phe	Ile	Thr	Asp	Glu	Arg
Thr	Gly	Pro	His 275	Phe	Ile	Ser	Thr	Asn	Asp	Glu	Asn	Val	Lys	Asn	Leu
Ile	Glu	Thr	Ala	Thr	Phe	Val	Ile	Thr	Glu	Ser	Tyr	Ile	Pro	Asp	Asp
Ile 305	His	Pro	Asn	Gly	Lys 310	Ile	Ile	Gln	Leu	Trp	His	Gly	Thr	Pro	Ile
Lys	Lys	Leu	Phe	Leu	Asp 325	Ser	Lys	Glu	Pro	His	Gln	Asn	Leu	Asn	Ile
Tyr	Asn	Tyr	Arg 340	Ala	Arg	Lys	Tyr	Asn	Lys	Trp	Thr	Gln	Gln	Asp	Tyr
Leu	Ile	Val	Asp 355	Ser	Glu	Glu	Ser	Lys	Thr	Tyr	Phe	Glu	Ser	Ala	Phe
Pro	Ser	Gln	Lys	Ile	Asp	Ile	Leu	Pro	Val	Gly	Tyr	Pro	Arg	Asn	Asn
Tyr 385	Leu	Leu	Asn	Arg	Ile 390	Asn	Asp	Val	Gly	Leu	His	Lys	Arg	Ile	Phe
Ser	Glu	Ile	Asn	Ile	Asp	Pro	Thr	Lys	Arg	Val	Leu	Leu	Tyr	Ala	Pro

405 410 415
 Thr Trp Lys Thr Asn Ser Ser Asp Asp Asp Ile Phe Pro Ile Asn Glu
 420 425 430
 Gln Leu Leu Thr His Tyr Asn Val Ile Tyr Lys Gly His Val Glu Ser
 435 440 445
 Lys Asn Asp Leu Val Pro Glu Gly Val Ile Asn Pro Pro Asn Asn Ile
 450 455 460
 Glu Thr Gln Asp Leu Ile Ile Ile Ser Asp Val Val
 465 470 475

<210> 5186
 <211> 41
 <212> PRT
 <213> S.epidermidis

<400> 5186
 Tyr Leu Phe Met Glu Lys Thr Lys Ile Ile Thr Thr Asn Thr Leu Ser
 1 5 10 15
 Tyr Arg Leu Ala Leu Asn Leu Thr Lys Gly Ile Ile Ile Cys Leu Lys
 20 25 30
 Leu Cys Gln Asn Phe Lys Ser Leu Leu
 35 40

<210> 5187
 <211> 41
 <212> PRT
 <213> S.epidermidis

<400> 5187
 His Tyr Val Ile Val Leu Asp Tyr Leu Tyr Leu Ser Val Ser Gly His
 1 5 10 15
 Leu Ser Cys His Ser Phe Cys Lys Ser Lys Phe Ile Glu Met Tyr Phe
 20 25 30
 Ser Tyr Thr Lys Pro Glu Met Lys Leu
 35 40

<210> 5188
 <211> 60
 <212> PRT
 <213> S.epidermidis

<400> 5188
 Lys Phe Tyr Met Leu Ala Pro Thr Leu Ile Ile Ile Ser Met Ile His
 1 5 10 15
 Ile Thr Val Glu Leu His Met Gln Arg Cys Thr Ile Val Ser Thr Leu
 20 25 30
 Thr Cys Leu Phe Ile Ser Thr Leu Ile Thr Val Ser Leu Ile Gln Ile
 35 40 45
 Lys Arg Leu Lys Lys Asp Asn Asn Leu Asn Gln Ile
 50 55 60

<210> 5189
 <211> 46
 <212> PRT
 <213> S.epidermidis

<400> 5189

Cys	Leu	Ser	Ile	Val	Tyr	Met	Asn	Val	Ser	Val	Tyr	Lys	Asn	Asp	Asn
1				5					10					15	
Tyr	Ile	Phe	Glu	Ser	Ser	Tyr	Ile	Gln	Phe	Ile	Tyr	Val	Asn	Cys	Arg
			20					25					30		
Asn	Leu	Trp	Asn	Ile	Thr	Arg	Lys	Ser	Val	Thr	Ile	Cys	Lys		
		35					40					45			

<210> 5190

<211> 43

<212> PRT

<213> S.epidermidis

<400> 5190

Ile	Pro	Phe	Ile	Leu	Asn	Thr	Val	Arg	His	Ser	Lys	Asn	Lys	Met	Ile
1				5					10					15	
Gly	Ile	Ala	Ala	Ile	Lys	Asp	Asp	Asn	Ser	Lys	Leu	Pro	Asn	Gly	Leu
			20					25					30		
Lys	Asp	Ser	Thr	Asn	Ile	Leu	Asn	Ser	Pro	His					
		35					40								

<210> 5191

<211> 62

<212> PRT

<213> S.epidermidis

<400> 5191

Lys	Pro	Ser	Ile	Ile	Pro	Leu	Met	Ser	Asn	Ile	Asn	Gly	Ala	Ala	Ser
1				5					10					15	
Glu	Ala	Arg	Val	Lys	Met	Met	Lys	Val	Asn	Thr	Ser	Lys	Met	His	Lys
			20					25					30		
Lys	Ala	Gly	Ile	Ile	Thr	Ile	Lys	Lys	Leu	Ser	Lys	Leu	Ser	Pro	Ile
		35					40					45			
Thr	Ala	Thr	Ile	Ala	Asp	Glu	Ile	Phe	Ile	Asn	Asp	Thr	Phe		
	50					55					60				

<210> 5192

<211> 114

<212> PRT

<213> S.epidermidis

<400> 5192

Lys	Gly	Asn	Ile	Thr	Lys	Ile	Thr	Trp	Thr	Ala	Thr	Asp	Lys	Gly	Ile
1				5					10					15	
Gly	Pro	His	Glu	Phe	Ile	Glu	Phe	Pro	Ile	Val	Val	Ala	Asn	Pro	Lys
			20					25					30		
Lys	Glu	Gly	Thr	Phe	Lys	Trp	Asn	Thr	Thr	Gln	Thr	Tyr	Asp	Asn	Gly
		35					40					45			
Asp	Val	Val	Lys	Trp	Thr	Gly	Lys	Glu	Asp	Ser	Ala	His	Pro	Ala	Pro
	50					55					60				
Thr	Thr	Thr	Val	Lys	Lys	Gly	Ala	Asn	Pro	Asn	Asp	Thr	His	Ser	Asp
65					70					75				80	
Ser	Ser	Gln	Gly	Asp	Ser	Ile	Ala	Leu	Trp	Ile	Val	Ala	Ile	Val	Ala
			85					90						95	
Ile	Val	Ile	Ser	Leu	Ile	Ala	Leu	Phe	Lys	Gln	Ala	His	Pro	Lys	Lys
			100					105						110	

Phe Asn

<210> 5193

<211> 352

<212> PRT

<213> S.epidermidis

<400> 5193

Gly	Val	Leu	Met	Ser	Asp	Ser	Gln	Arg	Glu	Gln	Arg	Lys	Asn	Glu	His
1			5						10				15		
Val	Glu	Ile	Ala	Met	Ser	Gln	Lys	Asp	Ala	Leu	Val	Ser	Asp	Phe	Asp
			20					25					30		
Lys	Val	Arg	Phe	Val	His	His	Ser	Ile	Pro	Ser	Ile	Asp	Val	Ser	Gln
		35					40					45			
Val	Asp	Met	Thr	Ser	His	Thr	Thr	Lys	Phe	Asp	Leu	Ala	Tyr	Pro	Ile
	50					55					60				
Tyr	Ile	Asn	Ala	Met	Thr	Gly	Gly	Ser	Asp	Trp	Thr	Lys	Gln	Ile	Asn
65					70					75				80	
Glu	Lys	Leu	Ala	Ile	Val	Ala	Arg	Glu	Thr	Gly	Ile	Ala	Met	Ala	Val
				85					90					95	
Gly	Ser	Thr	His	Ala	Ala	Leu	Arg	Asn	Pro	Asn	Met	Ile	Glu	Thr	Phe
			100					105					110		
Ser	Ile	Val	Arg	Lys	Thr	Asn	Pro	Lys	Gly	Thr	Ile	Phe	Ser	Asn	Val
		115				120						125			
Gly	Ala	Asp	Val	Pro	Val	Asp	Lys	Ala	Leu	Gln	Ala	Val	Glu	Leu	Leu
	130					135					140				
Asp	Ala	Gln	Ala	Leu	Gln	Ile	His	Val	Asn	Ser	Pro	Gln	Glu	Leu	Val
145					150					155					160
Met	Pro	Glu	Gly	Asn	Arg	Glu	Phe	Ala	Ser	Trp	Met	Ser	Asn	Ile	Glu
				165					170					175	
Ser	Ile	Val	Lys	Arg	Val	Asp	Val	Pro	Val	Ile	Ile	Lys	Glu	Val	Gly
			180					185					190		
Phe	Gly	Met	Ser	Lys	Glu	Thr	Leu	Gln	Ala	Leu	Tyr	Asp	Ile	Gly	Val
		195					200					205			
Asn	Tyr	Val	Asp	Val	Ser	Gly	Arg	Gly	Gly	Thr	Asn	Phe	Val	Asp	Ile
	210					215					220				
Glu	Asn	Glu	Arg	Arg	Ser	Asn	Lys	Asp	Met	Asn	Tyr	Leu	Ser	Gln	Trp
225					230					235					240
Gly	Gln	Ser	Thr	Val	Glu	Ser	Leu	Leu	Glu	Ser	Thr	Glu	Phe	Gln	Asp
				245					250					255	
Arg	Leu	Asn	Ile	Phe	Ala	Ser	Gly	Gly	Leu	Arg	Thr	Pro	Leu	Asp	Ala
			260					265					270		
Val	Lys	Cys	Leu	Ala	Leu	Gly	Ala	Lys	Ala	Ile	Gly	Met	Ser	Arg	Pro
		275					280					285			
Phe	Leu	Asn	Gln	Val	Glu	Gln	Ser	Gly	Ile	Thr	Asn	Thr	Val	Asp	Tyr
	290					295					300				
Val	Glu	Ser	Phe	Ile	Gln	His	Met	Lys	Lys	Ile	Met	Thr	Met	Leu	Asp
305					310					315					320
Ala	Pro	Asn	Ile	Glu	Arg	Leu	Arg	Gln	Ala	Asp	Ile	Val	Met	Ser	Pro
				325					330					335	
Glu	Leu	Ile	Ser	Trp	Ile	Asn	Gln	Arg	Gly	Leu	His	Leu	Asn	Arg	Lys
			340					345					350		

<210> 5194

<211> 40

<212> PRT

<213> S.epidermidis

<400> 5194

Thr	Asn	Leu	Ile	Ile	Tyr	Ile	Asn	Cys	Val	Thr	Gln	Lys	Asn	Lys	Ser
1				5					10					15	
Gln	His	Tyr	Glu	Asn	Ser	Phe	Ile	Thr	Gln	Phe	Lys	Leu	Gln	Leu	Phe
			20					25					30		
Thr	Cys	Tyr	Pro	Leu	Tyr	Thr	Asn								
		35					40								

<210> 5195

<211> 133

<212> PRT

<213> S.epidermidis

<400> 5195

Arg	Arg	Ile	Ile	Met	Ser	Ile	Lys	Glu	Lys	Leu	Val	Ile	Glu	Leu	Met
1				5					10					15	
Asn	Leu	Lys	Asp	Thr	Val	Lys	Tyr	Glu	Leu	Ser	Glu	Leu	Asn	Glu	Gln
			20					25					30		
Gln	Tyr	Leu	Phe	Met	Asn	Gly	Pro	Ala	Pro	Gln	Leu	Met	Lys	Arg	Ala
		35				40					45				
Met	Lys	Met	Ser	Tyr	Ile	Leu	Gly	Gln	Lys	Glu	Ala	Ile	Asp	His	Phe
	50				55					60					
Leu	Leu	Leu	Ile	Asp	Thr	Cys	His	Glu	Asn	Val	Leu	Leu	Asp	Asn	Cys
65				70					75					80	
Gln	Asp	Tyr	Gln	Lys	Gln	Ile	Gln	His	Lys	Gln	Phe	Ser	Leu	Gln	Glu
			85						90					95	
Asp	Ile	Ile	His	Gln	Ile	Asn	Gln	Ser	Lys	Glu	Phe	Glu	Ser	Phe	Leu
			100				105						110		
Ser	Thr	Tyr	Tyr	Val	Asn	Lys	Gly	Lys	Tyr	Asp	Ile	Thr	Ser	Lys	Ile
		115					120						125		
Lys	Thr	Leu	Leu	Glu											
		130													

<210> 5196

<211> 548

<212> PRT

<213> S.epidermidis

<400> 5196

Phe	Ile	Thr	Ile	Thr	Leu	Tyr	Ile	Gly	Gly	Ile	His	Met	Ser	Tyr	Ser
1				5					10					15	
Ile	Gly	Ile	Asp	Phe	Gly	Thr	Ala	Ser	Gly	Arg	Val	Ile	Leu	Ala	Asp
			20					25					30		
Thr	Ser	Asn	Gly	His	Ile	Ile	Ser	Arg	Tyr	Glu	Glu	Asp	Tyr	Ala	Asn
		35				40						45			
Gly	Thr	Tyr	Met	Asn	Ser	Leu	Tyr	Asp	Lys	Pro	Leu	Pro	Glu	Asn	Tyr
	50				55						60				
Phe	Leu	Gln	Asn	Ala	Asp	Asp	Tyr	Leu	Gln	Ile	Leu	Glu	Gln	Gly	Val
65				70					75					80	
Gln	Phe	Val	Leu	Glu	Asp	Ser	Lys	Val	Asn	Lys	Asn	Asp	Val	Val	Gly
			85					90						95	
Ile	Gly	Val	Asp	Phe	Thr	Ser	Ser	Thr	Ile	Ile	Phe	Leu	Asp	Glu	Gln
			100					105					110		

<210> 5197
 <211> 154
 <212> PRT
 <213> S.epidermidis

<400> 5197
 Glu Ile Lys Met Val Arg Arg Ile Glu Asp His Ile Ser Phe Leu Glu
 1 5 10 15
 Lys Phe Ile Asn Asp Val Asn Thr Leu Thr Ala Lys Leu Leu Lys Asp
 20 25 30
 Leu Gln Thr Glu Tyr Gly Ile Ser Ala Glu Gln Ser His Val Leu Asn
 35 40 45
 Met Leu Ser Ile Glu Ala Leu Thr Val Gly Gln Ile Thr Glu Lys Gln
 50 55 60
 Gly Val Asn Lys Ala Ala Val Ser Arg Arg Val Lys Lys Leu Leu Asn
 65 70 75 80
 Ala Glu Leu Val Lys Leu Glu Lys Pro Asp Ser Asn Thr Asp Gln Arg
 85 90 95
 Leu Lys Ile Ile Lys Leu Ser Asn Lys Gly Lys Lys Tyr Ile Lys Glu
 100 105 110
 Arg Lys Ala Ile Met Ser His Ile Ala Ser Asp Met Thr Ser Asp Phe
 115 120 125
 Asp Ser Lys Glu Ile Glu Lys Val Arg Gln Val Leu Glu Ile Ile Asp
 130 135 140
 Tyr Arg Ile Gln Ser Tyr Thr Ser Lys Leu
 145 150

<210> 5198
 <211> 48
 <212> PRT
 <213> S.epidermidis

<400> 5198
 Val Cys Met Met Phe Ser Thr Phe Val Val Leu Ser Leu Arg Lys Ile
 1 5 10 15
 Tyr Thr Asn Gln His Ala Ile Val Lys Leu Ile Tyr Leu Ser Pro Thr
 20 25 30
 Ser His Thr Ile Tyr Leu Thr Gly Asn Ile Thr Cys Ile Ile Arg Gly
 35 40 45

<210> 5199
 <211> 231
 <212> PRT
 <213> S.epidermidis

<400> 5199
 Lys Val Val Ile Tyr Met Ile Lys Val Asn Ala Ile Ser Ile Gly Lys
 1 5 10 15
 Ile Glu Thr Leu Ser Tyr Gly Asn Tyr Lys Pro Met Gln Ser Ala Leu
 20 25 30
 Asn Lys Ile Pro Phe Lys Gly Gln Met Trp Leu Asn Arg Leu Gly Phe
 35 40 45
 Val Asp Asp Glu Gln Ala Tyr His Asn His Gly Gly Ile His Lys Ala
 50 55 60
 Ile Cys Cys Phe Ser Lys Ser Asn Tyr Gln Leu Phe Lys Asp Asp Leu

Leu Leu Phe Ile Val Ile Leu Gly Ser Leu Thr Ala Phe Gly Pro Leu
 20 25 30
 Ala Ile Asp Met Phe Leu Pro Gly Leu Pro Asn Ile Ser His Asp Phe
 35 40 45
 Asp Ile Ser Ala Ser Thr Thr Gln Leu Thr Ile Ser Phe Phe Met Ile
 50 55 60
 Gly Leu Ala Leu Gly Asn Phe Leu Ala Gly Pro Ile Ser Asp Ile Thr
 65 70 75 80
 Gly Arg Lys Lys Pro Leu Ile Phe Ser Leu Ile Ile Phe Thr Ile Ala
 85 90 95
 Ser Leu Gly Ile Ile Phe Val Thr Asn Ile Trp Ile Met Ile Ile Leu
 100 105 110
 Arg Phe Ile Gln Gly Leu Thr Gly Gly Ala Gly Ala Val Ile Ser Arg
 115 120 125
 Ala Ile Ala Ser Asp Met Tyr Ser Gly Asn Ala Leu Thr Lys Phe Leu
 130 135 140
 Ser Leu Leu Met Leu Val Asn Gly Ile Ala Pro Ile Ile Ala Pro Ala
 145 150 155 160
 Leu Gly Gly Ile Ile Leu Asn Tyr Gly Pro Trp Arg Ile Val Phe Val
 165 170 175
 Ile Leu Thr Met Phe Gly Ile Val Met Leu Ile Gly Thr Leu Phe Lys
 180 185 190
 Val Pro Glu Ser Leu Glu Lys Ser Leu Arg Glu Ser Ser Asn Ile Gly
 195 200 205
 Thr Met Leu Ile Asn Phe Lys Glu Leu Phe Lys Thr Pro Arg Phe Val
 210 215 220
 Leu Pro Met Leu Ile Gln Gly Val Ser Phe Val Leu Leu Phe Thr Tyr
 225 230 235 240
 Ile Ser Ala Ser Pro Phe Ile Val Gln Thr Ile Tyr Gly Leu Thr Pro
 245 250 255
 Leu Asn Phe Ser Ile Met Phe Ala Phe Ile Gly Val Thr Leu Ile Ile
 260 265 270
 Ser Ser Gln Leu Thr Gly Lys Leu Val Asp Tyr Ile Asp Arg Leu Leu
 275 280 285
 Leu Leu Arg Ile Met Ser Thr Ile Gln Val Ile Gly Val Ile Ile Val
 290 295 300
 Ser Leu Thr Leu Leu Asn His Trp Thr Phe Trp Ile Leu Ser Cys Gly
 305 310 315 320
 Phe Val Ile Leu Val Ala Pro Val Thr Gly Ile Ala Thr Leu Gly Phe
 325 330 335
 Ser Ile Ala Met Asp Glu Ser Lys Gly Ala Lys Gly Ser Ser Ser Ser
 340 345 350
 Leu Leu Gly Leu Phe Gln Thr Leu Leu Gly Gly Val Ile Ser Pro Leu
 355 360 365
 Val Gly Ile Lys Gly Asp Ser Asn Ala Ile Pro Tyr Ile Ile Val Ile
 370 375 380
 Val Ile Thr Ala Ile Ile Leu Met Val Leu Gln Leu Ile Asn Val Lys
 385 390 395 400
 Ile Phe Lys Lys Ala Lys Ile His
 405

<210> 5203

<211> 208

<212> PRT

<213> S.epidermidis

<400> 5203

Lys Arg Glu Val Ile Tyr Leu Asp Phe Ile Asn Gln Gln Thr Thr Gln
 1 5 10 15
 Thr Ala Lys Ala Leu Leu Gly Val Lys Ile Ile Tyr Gln Asp Asp Tyr
 20 25 30
 Gln Thr Tyr Thr Gly Tyr Ile Val Glu Thr Glu Ala Tyr Leu Gly Ile
 35 40 45
 Gln Asp Lys Ala Ala His Gly Phe Gly Gly Lys Ile Thr Pro Lys Val
 50 55 60
 Thr Ser Leu Tyr Lys Lys Gly Gly Thr Ile Tyr Ala His Val Met His
 65 70 75 80
 Thr His Leu Leu Ile Asn Phe Val Thr Arg Thr Glu Gly Ile Pro Glu
 85 90 95
 Gly Val Leu Ile Arg Ala Ile Glu Pro Asp Glu Gly Ile Gly Ala Met
 100 105 110
 Asn Val Asn Arg Gly Lys Ser Gly Tyr Glu Leu Thr Asn Gly Pro Gly
 115 120 125
 Lys Trp Thr Lys Ala Phe Asn Ile Pro Arg Ser Ile Asp Gly Ser Thr
 130 135 140
 Leu Asn Asp Cys Lys Leu Ser Ile Asp Thr Asn His Arg Lys Tyr Pro
 145 150 155 160
 Lys Thr Ile Ile Glu Ser Gly Arg Ile Gly Ile Pro Asn Lys Gly Glu
 165 170 175
 Trp Thr Asn Lys Pro Leu Arg Phe Thr Val Lys Gly Asn Pro Tyr Val
 180 185 190
 Ser Arg Met Arg Lys Ser Asp Phe Gln Asn Pro Asp Asp Thr Trp Lys
 195 200 205

<210> 5204

<211> 54

<212> PRT

<213> S.epidermidis

<400> 5204

Asn Leu Leu Phe Asn Tyr Cys Cys Pro Phe Ala Asp Ile Ile Ile Asn
 1 5 10 15
 Lys Lys Leu Lys Lys Ile Val Tyr Ser Ile Glu Ser Leu Leu Ala Tyr
 20 25 30
 Lys Ile Arg Lys Pro Arg Thr Leu Ile Phe Val Leu Gly Ala Tyr Tyr
 35 40 45
 His Lys Gln Ile Leu Tyr
 50

<210> 5205

<211> 320

<212> PRT

<213> S.epidermidis

<400> 5205

Lys Glu Leu Leu Ile Met Ile Thr Ala Tyr Lys His Ala Leu His His
 1 5 10 15
 Pro Ser Gln Ile Ile Glu Thr Glu Ile Asn His Ser Ala Ser Trp Ile
 20 25 30
 Asn Val Val Glu Pro Asp Arg Glu Glu Ile Glu Gly Leu Met Glu Phe
 35 40 45
 Tyr Asn Ile Pro Glu Asp Phe Ile Arg Asp Pro Leu Asp Ser Glu Glu


```

Ile Thr Ala Asn Val Asp Glu Lys Asp Ile Ser Asp Val Glu Lys Gly
  130                      135                      140
Asn Asp Val Asp Val Asp Ile Asp Gly Gln Lys Ala Ser Ile Lys Gly
 145                      150                      155                      160
Lys Val Glu Glu Val Gly Gln Ala Thr Ala Ala Ser Phe Ser Leu Met
                      165                      170                      175
Pro Ser Ser Asn Ser Asp Gly Asn Tyr Thr Lys Val Ser Gln Val Val
                      180                      185                      190
Pro Val Lys Ile Ser Leu Asp Ser Asn Pro Ser Lys Asn Val Val Pro
                      195                      200                      205
Gly Met Asn Ala Glu Val Lys Ile His Lys Asn
  210                      215

```

<210> 5207

<211> 410

<212> PRT

<213> S.epidermidis

<400> 5207

```

Val Leu Val Leu Phe Ser Gly Asp Phe Thr Thr Met Pro Leu Asn Val
  1                      5                      10                      15
Ala Ile Thr Ile Thr Val Ile Val Ala Leu Leu Met Asn Arg Lys Glu
                      20                      25                      30
Thr Phe Ala Lys Lys Val Glu Val Phe Thr Lys Gly Ala Gly His Ser
                      35                      40                      45
Asn Ile Ile Leu Met Met Leu Ile Phe Ile Leu Ala Gly Ala Phe Ser
  50                      55                      60
Thr Thr Ala Glu Lys Met Gly Gly Val Ser Ser Thr Val Asn Leu Gly
  65                      70                      75                      80
Leu Ser Leu Ile Pro Gln Asn Leu Ile Ile Val Gly Leu Phe Ile Ile
                      85                      90                      95
Cys Met Phe Val Ser Ile Ser Met Gly Thr Ser Val Gly Thr Val Ala
                      100                      105                      110
Ala Ile Ala Pro Val Gly Phe Gly Phe Ala Gln Ala Thr Asp Val Pro
                      115                      120                      125
Ala Ala Leu Ala Met Ala Thr Val Val Gly Gly Ala Met Phe Gly Asp
                      130                      135                      140
Asn Leu Ser Met Ile Ser Asp Thr Thr Ile Ala Ala Val Arg Thr Gln
 145                      150                      155                      160
Lys Thr Lys Met Ser Asp Lys Phe Lys Val Asn Phe Lys Ile Val Leu
                      165                      170                      175
Pro Gly Ala Ile Ile Thr Ile Ile Ile Leu Phe Phe Leu Thr Asn Gly
                      180                      185                      190
Ile Ser Ile Asp His Thr Lys Asn Tyr Asp Tyr Asn Leu Ile Lys Val
                      195                      200                      205
Ile Pro Tyr Leu Leu Val Leu Ile Leu Ala Leu Val Gly Ile Asn Val
  210                      215                      220
Ile Ile Val Leu Ile Gly Gly Thr Val Leu Ala Gly Ile Ile Gly Leu
 225                      230                      235                      240
Ile Asp Gly Ser Phe Gly Trp Asn Gly Leu Leu Asn Ala Ile Ser Lys
                      245                      250                      255
Gly Ile Ile Gly Met Glu Asp Ile Ala Met Ile Ala Leu Leu Ile Gly
                      260                      265                      270
Gly Leu Val Gly Ile Ile Gln His Asn Gly Gly Ile Asp Trp Leu Leu
                      275                      280                      285
Asn Phe Val Arg Ser Lys Val Lys Ser Lys Arg Gly Ala Glu Leu Gly

```

290		295		300
Ile Ala Ser Leu Val Ser Ala Ala Asp Ile Ser Thr Ala Asn Asn Thr				
305		310		315
Ile Ser Ile Ile Met Ala Gly Pro Leu Ala Lys Asn Ile Ala Asp Glu				
	325		330	335
Tyr Asp Val Asp Pro Arg Lys Ser Ala Ser Ile Leu Asp Ile Phe Gly				
	340		345	350
Gly Cys Phe Gln Gly Leu Leu Pro Tyr Ser Pro Gln Val Ile Ser Ala				
	355		360	365
Ala Gly Val Ala Gly Ile Ser Pro Phe Leu Met Leu Gln Tyr Ser Ile				
	370		375	380
Tyr Pro Ile Leu Leu Gly Val Cys Gly Leu Val Ala Ile Ile Leu Arg				
385		390		395
Val Pro Arg Leu Asn Gln Ser Ser Lys Lys				400
	405		410	

<210> 5208
 <211> 142
 <212> PRT
 <213> S.epidermidis

<400> 5208
Gly Gly Phe Phe Met Arg Arg Leu Leu Tyr Ser Phe Leu Phe Tyr Met
1 5 10 15
Val Ile Gly Leu Leu Ser Gly Phe Tyr Tyr Arg Glu Leu Thr Lys Ala
20 25 30
His Asp Phe Val Gly Asp Thr Gln Leu Ser Leu Val His Thr His Thr
35 40 45
Leu Ile Leu Gly Met Phe Met Phe Leu Leu Leu Leu Pro Leu Glu Lys
50 55 60
Val Phe Lys Leu Ser Ser Tyr Tyr Leu Phe Asn Trp Phe Phe Phe Val
65 70 75 80
Tyr His Leu Gly Val Leu Ile Thr Ile Ser Met Met Thr Val Lys Gly
85 90 95
Thr Phe Gln Val Ile Gly Lys Lys Phe Ser Pro Glu Met Phe Ala Gly
100 105 110
Phe Ala Gly Ile Gly His Thr Gly Met Leu Ala Gly Leu Leu Leu Leu
115 120 125
Phe Phe Leu Leu Arg Gln Ala Ile Leu Thr Glu Pro Lys Lys
130 135 140

<210> 5209
 <211> 94
 <212> PRT
 <213> S.epidermidis

<400> 5209
Cys Lys Thr Leu Thr Asn Phe Leu Ser Lys Ser Leu Leu Ser Val Leu
1 5 10 15
Val Ile Ile Phe Glu Lys Ile Ala Arg Ser Leu Ala Gly Val Lys Gly
20 25 30
Gly Phe Ile Leu Lys Val Val Leu Tyr Phe Ile Tyr Phe Phe Val Ala
35 40 45
Phe Phe Val Val Asp Ser Leu Ile Ser Leu Val Phe Pro Ile Glu Phe
50 55 60
Asp Val Tyr Thr Asn Leu Ile Thr Ala Phe Ile Phe Ala Val Phe Met

<400> 5213
Val Ile Glu Leu Cys Leu Thr Leu Gln Asp Ile Cys Asn Asn Val Asn
1 5 10 15
Thr Tyr Tyr Phe Lys Tyr Phe Asn Asn Ser Leu His Ile Phe Asn Asn
20 25 30
Ser Lys Val Phe Phe Glu Asn Ser His Thr Tyr

35

40

<210> 5214

<211> 402

<212> PRT

<213> S.epidermidis

<400> 5214

```

Met Ile Glu Phe Asp Ala Ile Thr Thr Leu Cys Leu Ala Cys Val Leu
1      5      10      15
Tyr Leu Ile Gly Gln Thr Ile Ile Asn His Val Ser Ile Leu Arg Arg
20     25     30
Ile Cys Ile Pro Ala Pro Val Ile Gly Gly Leu Leu Phe Ala Ile Leu
35     40     45
Val Ala Ile Leu Asp Ser Phe Asn Ile Val Lys Ile Lys Leu Asp Ser
50     55     60
Ala Phe Ile Gln Asn Phe Phe Met Leu Ala Phe Phe Thr Thr Ile Gly
65     70     75     80
Leu Gly Ala Ser Leu Lys Leu Phe Lys Ile Gly Gly Lys Val Met Leu
85     90     95
Ile Tyr Phe Thr Phe Cys Gly Ile Met Ala Ile Cys Gln Asn Ile Ile
100    105    110
Gly Val Ser Leu Ala Lys Leu Leu Asn Ile Lys Pro Leu Leu Gly Leu
115    120    125
Thr Ala Gly Ser Met Ser Met Glu Gly Gly His Gly Asn Ala Ala Ala
130    135    140
Tyr Gly Lys Thr Leu Gln Asp Met Gly Val Asp Ser Ala Val Ala Ala
145    150    155    160
Ala Leu Ala Ala Ala Thr Leu Gly Leu Val Phe Gly Gly Leu Ile Gly
165    170    175
Gly Pro Ile Val Lys Tyr Leu Ile Lys Arg Tyr Asp Leu Lys Pro Glu
180    185    190
His Arg Asp Asp Ser Phe Lys Asn Tyr Gly Val Val Glu Tyr Asn Gln
195    200    205
Ser Leu His Thr Lys Tyr Lys Pro Ile Gln Val Phe Phe Ile Gln Phe
210    215    220
Ser Ile Leu Val Phe Cys Met Ala Leu Gly Thr Tyr Ile Gly Asn Thr
225    230    235    240
Phe Thr Asp Leu Thr Gly Val Asn Ile Pro Met Tyr Val Gly Ser Met
245    250    255
Phe Val Ala Val Ile Ile Arg Asn Ala Thr Asp Phe Ile Gly Trp Asp
260    265    270
Ile Val Asp Leu Lys Met Ser Glu Gln Ile Gly Asp Ile Ser Leu Gly
275    280    285
Ile Phe Leu Ser Leu Ala Leu Met Ser Ile Gln Leu Thr Gln Ile Tyr
290    295    300
Ser Leu Ala Ile Pro Leu Ile Ile Ile Val Leu Val Gln Val Val Phe
305    310    315    320
Met Val Leu Phe Ser Ile Phe Ile Leu Phe Lys Gly Leu Gly Lys Asp
325    330    335
Tyr Asp Ala Ala Val Met Val Gly Gly Phe Ile Gly His Gly Leu Gly
340    345    350
Ala Thr Pro Asn Ala Met Ala Asn Leu Asp Val Ile Thr Lys Lys Phe
355    360    365
Gly Asn Ser Pro Lys Ala Tyr Leu Val Val Pro Ile Val Gly Ala Phe
370    375    380

```

2111

Leu Ile Asp Leu Ile Gly Val Ile Ile Val Met Ser Phe Ile Gln Leu
 385 390 395 400
 Phe Ser

<210> 5215
 <211> 62
 <212> PRT
 <213> S.epidermidis

<400> 5215
 Thr Val His Ser Tyr Ile Tyr Leu Leu Ser Arg Ile Asn Ser Ile Lys
 1 5 10 15
 Leu Tyr Thr Val Val Ile Gln Ile Asn Tyr Ser Ile His Tyr Tyr Thr
 20 25 30
 Leu Gln Gly Thr Glu Phe Asn Leu Leu Ile His Thr Ser Leu Phe Lys
 35 40 45
 Leu His His Leu Leu Leu Thr Asn Tyr Lys Asn Gln Tyr Phe
 50 55 60

<210> 5216
 <211> 42
 <212> PRT
 <213> S.epidermidis

<400> 5216
 Ala Pro Ile Ser Asn Asn Ile Asp Phe Lys Lys Leu Phe Ser Ser Asn
 1 5 10 15
 His Phe Lys Asn Lys Asn His Ile Phe Ala Leu Ser Gln Tyr Ile Leu
 20 25 30
 Asn Asn His Asp Tyr Phe Val Leu Gly Ile
 35 40

<210> 5217
 <211> 47
 <212> PRT
 <213> S.epidermidis

<400> 5217
 Ile Ile Leu Ser Leu Leu Ile Leu Ser Cys Val Asn Lys Lys Arg Gln
 1 5 10 15
 Lys Lys His Thr Leu Lys Lys Phe Leu Cys Leu Asn Leu Ile Asn Leu
 20 25 30
 Tyr Ser Phe Tyr Ile Asn Cys Ile Leu Pro His Thr Thr Lys Ile
 35 40 45

<210> 5218
 <211> 362
 <212> PRT
 <213> S.epidermidis

<400> 5218
 Asp Ile Thr Ser Met Glu Gly Gly Tyr Lys Leu Asn Ile Thr Lys Ala
 1 5 10 15
 Ile Val Val Ala Ile Tyr Ile Ile Val Gly Ala Ala Leu Gly Val Ile
 20 25 30

bioRxiv preprint doi: <https://doi.org/10.1101/096860>; this version posted September 1, 2016. The copyright holder for this preprint (which was not certified by peer review) is the author/funder, who has granted bioRxiv a license to display the preprint in perpetuity. It is made available under aCC-BY-NC-ND 4.0 International license.

```

Ile Ile Pro Glu Val Val Thr Asp Leu Gly Ile His His His Ala Val
   35           40           45
Ile Thr Asn Tyr Tyr Val Asp Gly Phe Ile Gly Ile Ile Ile Phe Phe
   50           55           60
Ile Ile Phe Gly Leu Phe Ile Asn Lys Val Thr Tyr Thr Phe Lys Gln
  65           70           75           80
Phe Glu Gln Leu Ile Met Arg Arg Ser Ala Val Glu Ile Leu Phe Ala
           85           90           95
Thr Ile Gly Leu Ile Ile Gly Leu Phe Ile Ser Val Met Val Ser Phe
   100           105           110
Ile Leu Glu Met Ile Gly Asn Ser Ile Leu Asn His Phe Val Pro Met
   115           120           125
Ile Ile Thr Ile Ile Leu Cys Tyr Leu Gly Phe Gln Phe Gly Leu Lys
   130           135           140
Lys Arg Asp Glu Met Leu Met Phe Leu Pro Glu Asn Met Ala Arg Ser
 145           150           155           160
Met Ser Asn Asn Ile Arg Arg Ala Thr Pro Lys Ile Val Asp Thr Ser
           165           170           175
Ala Ile Ile Asp Gly Arg Ile Leu Asp Ile Ile Arg Cys Gly Phe Ile
           180           185           190
Asp Gly Asp Ile Leu Ile Pro Gln Gly Val Ile Asn Glu Leu Gln Val
   195           200           205
Ile Ala Asp Ala Lys Asp Ser Val Lys Arg Glu Lys Gly Gln Arg Gly
   210           215           220
Leu Asp Ile Leu Asn Gln Leu Tyr Asp Leu Asp Tyr Pro Thr Arg Val
 225           230           235           240
Ile His Pro Thr Gln Ser His Ser Asp Ile Asp Thr Leu Leu Ile Lys
           245           250           255
Leu Ala Gln Gln Tyr His Ala His Val Ile Thr Thr Asp Phe Asn Leu
   260           265           270
Asn Lys Val Cys His Val Gln Gly Ile Thr Ala Leu Asn Val Asn Asp
   275           280           285
Leu Ser Glu Ala Ile Lys Pro Asn Val His Gln Gly Asp Gln Leu Ser
   290           295           300
Ile Leu Leu Thr Lys Ile Gly Lys Glu Pro Gly Gln Gly Val Gly Tyr
 305           310           315           320
Leu Asp Asp Gly Thr Met Val Val Val Asp Asn Ala Lys Ser Tyr Ile
           325           330           335
Gly Gln Gln Val Asn Leu Glu Val Val Ser Leu Leu Gln Thr Ser Ser
   340           345           350
Gly Arg Ile Val Phe Ala Lys Phe Val Asp
   355           360

```

<210> 5219

<211> 68

<212> PRT

<213> S.epidermidis

<400> 5219

```

Ile Gln Thr Ser Ser Trp Leu Asn Ile Arg Lys Val Ile Ala Gln Arg
 1           5           10           15
Ala Glu Asn His Gln Lys Asn Tyr Lys Lys Asp Asn Ser Tyr Ile Ile
   20           25           30
Ser Ile Glu Ile Val Phe Ile Tyr Leu Phe Trp Asn Phe Leu Phe Gln
   35           40           45
Ala Phe His Ile Tyr Ile Asp Ile Asp Leu Ile Ile Ile Thr Met Phe

```

50
Val Gly Ile Lys
65

55

60

<210> 5220
<211> 331
<212> PRT
<213> S.epidermidis

<400> 5220

Glu	Val	Lys	Ser	Leu	Val	Lys	Ser	Gly	Lys	Ala	Arg	Ala	His	Thr	Asn
1			5						10					15	
Ile	Ala	Leu	Ile	Lys	Tyr	Trp	Gly	Lys	Ala	Asp	Glu	Thr	Tyr	Ile	Ile
		20					25					30			
Pro	Met	Asn	Asn	Ser	Leu	Ser	Val	Thr	Leu	Asp	Arg	Phe	Tyr	Thr	Glu
		35				40						45			
Thr	Lys	Val	Thr	Phe	Asp	Pro	Asp	Phe	Thr	Glu	Asp	Cys	Leu	Ile	Leu
	50				55					60					
Asn	Gly	Asn	Glu	Val	Asn	Ala	Lys	Glu	Lys	Glu	Lys	Ile	Gln	Asn	Tyr
65				70				75						80	
Met	Asn	Ile	Val	Arg	Asp	Leu	Ala	Gly	Asn	Arg	Leu	His	Ala	Arg	Ile
			85					90					95		
Glu	Ser	Glu	Asn	Tyr	Val	Pro	Thr	Ala	Ala	Gly	Leu	Ala	Ser	Ser	Ala
			100					105					110		
Ser	Ala	Tyr	Ala	Ala	Leu	Ala	Ala	Cys	Asn	Glu	Ala	Leu	Ser	Leu	
		115				120					125				
Asn	Leu	Ser	Asp	Thr	Asp	Leu	Ser	Arg	Leu	Ala	Arg	Arg	Gly	Ser	Gly
	130					135					140				
Ser	Ala	Ser	Arg	Ser	Ile	Phe	Gly	Gly	Phe	Ala	Glu	Trp	Glu	Lys	Gly
145				150					155					160	
His	Asp	Asp	Leu	Thr	Ser	Tyr	Ala	His	Gly	Ile	Asn	Ser	Asn	Gly	Trp
			165						170					175	
Glu	Lys	Asp	Leu	Ser	Met	Ile	Phe	Val	Val	Ile	Asn	Asn	Gln	Ser	Lys
			180					185					190		
Lys	Val	Ser	Ser	Arg	Ser	Gly	Met	Ser	Leu	Thr	Arg	Asp	Thr	Ser	Arg
		195				200						205			
Phe	Tyr	Gln	Tyr	Trp	Leu	Asp	His	Val	Asp	Glu	Asp	Leu	Asn	Glu	Ala
	210				215					220					
Lys	Glu	Ala	Val	Lys	Asn	Gln	Asp	Phe	Gln	Arg	Leu	Gly	Glu	Val	Ile
225				230					235					240	
Glu	Ala	Asn	Gly	Leu	Arg	Met	His	Ala	Thr	Asn	Leu	Gly	Ala	Gln	Pro
			245						250					255	
Pro	Phe	Thr	Tyr	Leu	Val	Gln	Glu	Ser	Tyr	Asp	Ala	Met	Ala	Ile	Val
		260					265						270		
Glu	Gln	Cys	Arg	Lys	Ala	Asn	Leu	Pro	Cys	Tyr	Phe	Thr	Met	Asp	Ala
		275				280						285			
Gly	Pro	Asn	Val	Lys	Val	Leu	Val	Glu	Lys	Lys	Asn	Lys	Gln	Ala	Val
	290				295						300				
Met	Glu	Gln	Phe	Leu	Lys	Val	Phe	Asp	Glu	Ser	Lys	Ile	Ile	Ala	Ser
305				310					315					320	
Asp	Ile	Ile	Ser	Ser	Gly	Val	Glu	Ile	Ile	Lys					
			325					330							

<210> 5221
<211> 90
<212> PRT

bioRxiv preprint doi: <https://doi.org/10.1101/000000>; this version posted January 1, 2015. The copyright holder for this preprint (which was not certified by peer review) is the author/funder, who has granted bioRxiv a license to display the preprint in perpetuity. It is made available under aCC-BY-NC-ND 4.0 International license.

<400> 5221

<210> 5222

<211> 413

<212> PRT

<213> S.epidermidis

<400> 5222

Val 1	Lys	Phe	Leu	Ala 5	Ser	Gln	Leu	Phe	Lys 10	Gly	Gly	Phe	Phe	Ile 15	Asp
Tyr	Leu	Gly	Val 20	Asp	Ile	Ser	Lys	Arg 25	Ser	Ser	Val	Val	Ala 30	His	Tyr
Lys	Asn	Glu	Lys 35	Phe	Gln	Lys	Glu	Phe 40	Phe	Ile	Gln	Asn	Asn	Lys	Asn
Gly	Tyr	Asn	Tyr 50	Leu	Leu	Lys 55	Tyr	Leu	Asn	Asp 60	Leu	Asp	His	Pro	Gln
Leu 65	Ile	Phe	Glu	Ser 70	Thr	Gly	Ile	Tyr	Ser	Arg 75	Ser	Met	Glu	Arg	Phe 80
Cys	Cys	Val	Asn 85	Gln	Ile	Asn	Tyr	Ile	Gln 90	Met	Asn	Pro	Leu	Glu	Ala
Lys	Phe	Lys	Thr 100	Ser	Ala	Leu	Arg	Ser 105	Trp	Lys	Thr	Asp	Gln	Ala	Asp
Ala	His	Lys 115	Leu	Ala	Cys	Leu	Gly 120	Pro	Thr	Leu	Lys	Gln 125	Thr	Asp	Asn
Leu	Pro 130	Ile	His	Glu	Leu	Ile 135	Phe	Phe	Glu	Leu	Arg 140	Glu	Arg	Val	Arg
Phe 145	His	Leu	Glu	Ile 150	Glu	Asn	Glu	Gln	Asn	Arg 155	Leu	Lys	Phe	Gln	Ile 160
Leu	Glu	Leu	Leu 165	His	Gln	Thr	Phe	Pro	Gly 170	Leu	Glu	Arg	Leu	Phe	Ser
Ser	Arg	Tyr	Ser 180	Ile	Ile	Ala	Leu	Asn 185	Ile	Ala	Glu	Ile	Phe	Thr	His
Pro	Asp 195	Met	Val	Leu	Asp	Ile 200	Asp	Lys	Glu	Val	Leu	Ile 205	Thr	His	Ile
Phe	Asn 210	Ser	Thr	Asp	Lys	Gly 215	Met	Ser	Met	Asp	Lys	Ala	Thr	Lys	Tyr
Ala 225	Leu	Gln	Leu	Arg 230	Val	Ile	Ala	Gln	Glu	Ser 235	Tyr	Pro	Asn	Val	Asp
Arg	His	Ser	Phe 245	Leu	Val	Glu	Lys	Leu	Arg 250	Leu	Leu	Ile	Gln	Gln	Leu
Lys	Gln	Ser	Ile 260	His	His	Leu	Lys	Gln 265	Leu	Asp	Asp	Ala	Met 270	Ile	Gln

<210> 5225
 <211> 41
 <212> PRT
 <213> S.epidermidis

<400> 5225
 Thr Ile His Pro Gln Ala Pro Thr Lys Pro Gln Ala Lys Tyr Asn Phe
 1 5 10 15
 Leu Gly Ala Ser Asn Met Thr Gln Lys Lys Ser Glu Ala Arg Lys Leu
 20 25 30
 Asn Ile Lys Leu Asn Ile Gln Asn Ile
 35 40

<210> 5226
 <211> 44
 <212> PRT
 <213> S.epidermidis

<400> 5226
 Ser Asn Tyr Pro Glu Cys Val Pro Leu Tyr Gly Leu Pro Ile Asn Gly
 1 5 10 15
 Ser Cys Leu Gly His Arg His Ile Tyr Ser Thr Tyr Ser Val Asn Thr
 20 25 30
 Gly Arg Arg Lys Asn Thr Trp Gln Glu Thr Phe Leu
 35 40

<210> 5227
 <211> 331
 <212> PRT
 <213> S.epidermidis

<400> 5227
 Phe Gly Val Leu Tyr Met Cys Thr Ala Ile Ser Leu Tyr Thr Lys Gln
 1 5 10 15
 Arg Tyr His Tyr Leu Ala Arg Thr Met Asp Phe Ala Phe Glu Phe Asn
 20 25 30
 Gly Ile Pro Thr Ile Val Pro Arg His Tyr His Tyr Gln Phe Asp Leu
 35 40 45
 Asp Ser Asp Met Arg Leu Glu Tyr Gly Phe Val Gly Thr Asn Leu Lys
 50 55 60
 Val Gly Arg Tyr Arg Phe Gly Asp Gly Ile Asn Glu Lys Gly Leu Ala
 65 70 75 80
 Ile Ser Asn His Tyr Phe Thr Gly Glu Ala Ser Tyr Ser Thr His Lys
 85 90 95
 Arg Tyr Gly Tyr Phe Asn Leu Ala Pro Glu Glu Phe Ile Val Trp Val
 100 105 110
 Leu Gly Phe Asn Lys Ser Ile Ser Glu Leu Lys Gln Lys Val Lys Lys
 115 120 125
 Ile Asn Ile Met Asn Glu Lys Asn Thr Thr Leu Asn Ile Val Pro Pro
 130 135 140
 Leu His Phe Met Val Thr Asp Glu Thr Gly His Thr Val Ala Ile Glu
 145 150 155 160
 Pro His Asn Gly Leu Leu Ile Val Lys Asp Asn Tyr Val His Thr Leu
 165 170 175
 Thr Asn Glu Pro Lys Leu Asp Trp His Leu Ser Asn Leu Arg Asn Tyr

Lys Asn Trp Ile Asn Leu Ser Gly Leu Pro Arg Lys Lys Thr Lys Arg
 35 40 45
 Gly Glu Gln Ile Ile Trp Lys Asn Ser Ile Gly Tyr Asn Val Asn Tyr
 50 55 60
 Phe Phe Glu Gly Ile Ser Gly Asp Ile Lys Ile Leu Asp Ser Tyr Arg
 65 70 75 80
 Lys Asn Asp Glu Arg Tyr Leu Lys Val Glu Val Lys Asn Glu Thr Tyr
 85 90 95
 Glu Ile Arg Ser Ser Asn Phe Lys Asn Cys Glu Ile Lys Lys Ile Val
 100 105 110
 Thr Asp Gly Tyr Lys His Asn Leu Gly Phe Ile Ile Asn Gly Cys Lys
 115 120 125
 Val Ile Gly Lys Arg Leu Asn Pro Arg Ser Lys Glu Arg Glu Tyr Lys
 130 135 140
 Met Leu Cys Leu Asn Thr Asn Leu Thr Phe Tyr Arg Arg Glu Ser Arg
 145 150 155 160
 Ile Asp Val Gly Ala Pro Ser Pro Tyr Ile Ser Gly Lys Tyr Val Tyr
 165 170 175
 Glu Gly Asn Trp Leu Tyr Asn Glu Lys Asn Val Leu Pro Phe Leu Lys
 180 185 190
 Asp Val Asn Asp Ala Lys Lys Tyr Thr Lys Phe Ser Arg Arg Glu Ile
 195 200 205
 Asn Cys Val Cys Pro Asn Cys Lys Thr Glu Lys Thr Thr Pro Val Asn
 210 215 220
 Asn Leu Val Gln Gln Gly Phe Phe Cys His Val Cys Ser Thr Asn Ile
 225 230 235 240
 Ser Tyr Pro Glu Lys Leu Met Ile Ala Leu Leu Asn Glu Asn Ser Val
 245 250 255
 Val Phe Glu Tyr Gln Lys Ile Phe Gln Asp Leu Lys Pro Lys Arg Phe
 260 265 270
 Asp Phe Tyr Leu Pro Glu Tyr Asn Leu Val Ile Glu Thr His Gly Lys
 275 280 285
 Gln His Tyr Lys Glu Asn Glu Ile Trp Tyr Arg Lys Ser Lys Glu Ser
 290 295 300
 Asp Val Val Lys Met Ser Tyr Cys Lys Lys Lys Asn Ile Lys Tyr Val
 305 310 315 320
 Glu Val Asp Cys Ser Leu Ser Asp Tyr Asn Phe Ile Met Asn Asn Ile
 325 330 335
 Asn Lys Thr Glu Leu Lys His Val Leu Lys Leu Tyr Asp Lys Glu Asn
 340 345 350
 Ile Ile Lys Arg Ile Lys Glu Leu Glu Gln Ile Lys Asp Val Asp Glu
 355 360 365
 Ile Ile Lys Leu Tyr Lys Asn Gly Arg Asn Leu Thr Tyr Ile Ser Arg
 370 375 380
 Asn Val Gly Leu Thr Lys Trp Lys Ile Glu Gly Leu Leu Lys Arg Leu
 385 390 395 400
 Gly Tyr Ile Ala Arg
 405

<210> 5231

<211> 226

<212> PRT

<213> S.epidermidis

<400> 5231

Arg Arg Leu Pro Ile Met Thr Asp Glu Arg His Val Leu Val Ile Phe

```

1           5           10           15
Pro His Pro Asp Asp Glu Thr Phe Ser Ser Ala Gly Thr Ile Ala Ser
                20                25                30
Tyr Ile Glu Lys Gly Ile Pro Val Thr Tyr Ala Cys Leu Thr Leu Gly
                35                40                45
Gln Met Gly Arg Asn Leu Gly Asn Pro Pro Phe Ala Thr Arg Glu Ser
                50                55                60
Leu Pro Phe Ile Arg Glu Arg Glu Leu Glu Glu Ala Cys Lys Ala Ile
65                70                75                80
Gly Ile Thr Asp Leu Arg Lys Met Gly Leu Arg Asp Lys Thr Val Glu
                85                90                95
Phe Glu Pro Tyr Asp Gln Met Asp Gln Met Ile Gln Ser Leu Ile Asp
                100                105                110
Glu Thr Asn Pro Ser Leu Ile Ile Ser Phe Tyr Pro Lys Phe Ala Val
                115                120                125
His Pro Asp His Glu Ala Thr Ala Glu Ala Val Val Arg Thr Val Gly
                130                135                140
Arg Met His Glu Ser Asp Arg Pro Arg Leu Thr Leu Val Ala Phe Ser
145                150                155                160
Asn Asp Ala Ser Glu Ile Leu Gly Glu Pro Asp Ile Gln Asn Asp Ile
                165                170                175
Ser Gln Tyr Ser Asp Ile Lys Leu Lys Ala Phe Glu Ala His Ala Ser
                180                185                190
Gln Thr Gly Pro Phe Leu Lys Gln Leu Ala Ser Pro Glu Ile Asp Gly
                195                200                205
Gln Ala Gln Ser Phe Leu Lys Ile Glu Pro Phe Trp Thr Tyr His Phe
                210                215                220
Glu Ser
225

```

<210> 5232

<211> 41

<212> PRT

<213> S.epidermidis

<400> 5232

```

Ile Lys Met Pro Ile Asn Glu Phe Met Lys Ile His Leu Leu Ala Ile
1           5           10           15
Leu Leu Gly Ile Met Ser Gln Arg Leu Phe Ser Phe Leu Ser Ile His
                20                25                30
Asn Lys Tyr Cys Ile His Ile Lys Ser
                35                40

```

<210> 5233

<211> 277

<212> PRT

<213> S.epidermidis

<400> 5233

```

Met Met Ala Leu Lys Lys Val Leu Thr Ile Ala Gly Ser Asp Thr Ser
1           5           10           15
Ala Gly Ala Gly Met Gln Ala Asp Leu Lys Thr Phe Gln Glu Leu Asp
                20                25                30
Val Tyr Gly Met Val Ala Leu Thr Ser Ile Val Thr Met Asp Lys Glu
                35                40                45
Thr Trp Ser His Asp Val Thr Pro Ile Asp Met Asn Val Phe Glu Lys

```

```
<210> 5234
<211> 200
<212> PRT
<213> S.epidermidis
```

<400> 5234															
Phe	Gln	Leu	Thr	Arg	Lys	Val	Arg	Tyr	Met	Asn	Leu	Asn	Lys	Gln	Gln
1				5					10					15	
His	Glu	Tyr	Thr	Ala	Leu	Cys	Leu	Ser	Gln	Thr	Glu	Asn	Lys	Ser	Ser
			20					25					30		
Glu	Glu	Leu	Phe	Glu	Ser	Leu	Ile	Glu	Glu	Leu	Lys	Pro	Leu	Ile	Tyr
		35					40					45			
Asn	Lys	Ile	Arg	Tyr	Ile	Ser	His	Asn	Lys	Tyr	Asp	Ile	Glu	Asp	Met
	50					55					60				
Tyr	Gln	Glu	Ile	Val	Ile	Lys	Phe	Tyr	Arg	Ala	Leu	Gln	Lys	Phe	Asp
65					70				75						80
Tyr	Gln	Gln	Gly	Val	Pro	Ile	Glu	His	Tyr	Ile	Tyr	Phe	Leu	Ile	Arg
			85						90					95	
Ser	Val	Lys	Tyr	Asp	Tyr	Leu	Arg	Lys	Val	Lys	Ala	Asn	Tyr	Lys	Arg
			100					105					110		
Gln	Pro	Leu	Leu	Val	Asn	Glu	Tyr	Ile	Val	Glu	Tyr	Asn	Ala	Thr	Leu
		115					120					125			
Ala	Leu	Asn	Asp	Ile	Glu	Arg	Ser	Ile	Ile	Arg	Lys	Glu	Leu	Thr	Leu
	130					135					140				
Ala	Phe	Lys	Arg	Ser	Glu	Val	Lys	Leu	Ser	Arg	Met	Glu	Arg	Arg	Ile
145					150					155					160

2121

Ile Arg Leu Leu Leu Asn Asp Tyr Lys Pro Lys Glu Ile Ala Met Val
 165 170 175
 Leu Asn Leu Glu Ser Lys Val Val Tyr Asn Ala Ile Gln Arg Ser Lys
 180 185 190
 Cys Lys Leu Lys Arg Ser Phe Glu
 195 200

<210> 5235
 <211> 50
 <212> PRT
 <213> S.epidermidis

<400> 5235
 Gln Thr Glu Leu Arg Arg Arg Leu Arg Gln Thr Leu Leu Asn Arg Ser
 1 5 10 15
 Tyr Tyr Cys Glu Gly Val Lys Leu Asn Ser Val Ser Leu Leu Phe
 20 25 30
 Tyr Ile Ala Leu Ile Val Leu Asn Val Ser Asn Asn Leu Phe Thr Leu
 35 40 45
 Phe Leu
 50

<210> 5236
 <211> 91
 <212> PRT
 <213> S.epidermidis

<400> 5236
 Ser Lys Tyr Thr Glu Val Val Lys Leu Arg His Lys Leu Leu Lys Thr
 1 5 10 15
 Ala Asn Asp Leu Asn Lys Leu Ile Leu His Ser Asp Glu Lys Val Lys
 20 25 30
 Ala Glu Phe His Thr Phe Asp Asn Gly Glu Val Gly Ile Thr Phe Trp
 35 40 45
 His Tyr Ser Gln Lys Tyr Glu Ser Asp Cys Asn His Leu Asn Phe Tyr
 50 55 60
 Glu Phe Phe Thr Asp Lys Glu Leu Gln Arg Ser Phe Glu Leu Ala Lys
 65 70 75 80
 Asp Val Ile Ala Gly Glu Cys Leu Ile Asp Glu
 85 90

<210> 5237
 <211> 112
 <212> PRT
 <213> S.epidermidis

<400> 5237
 Ser Ala Asp Thr Met Leu Thr Lys Leu Leu Thr Thr Ser Gly Asn Asp
 1 5 10 15
 Val Glu Tyr Thr Ile Asn Pro Gln Ala Ile Ile Lys Gly Asn Thr Ser
 20 25 30
 Phe Leu Leu Lys Pro Lys Phe Leu Ile Ile Ala Lys Ala Ile Gly Val
 35 40 45
 Lys Ile Lys Val Ala Pro Ser Leu Ala Lys Asn Ala Ala Ile Ile Ala
 50 55 60
 Pro Asn Ile Met Ile Asn Thr Asn Ile Phe Asn Pro Cys Pro Cys Asp

bioRxiv preprint doi: <https://doi.org/10.1101/096511>; this version posted September 1, 2016. The copyright holder for this preprint (which was not certified by peer review) is the author/funder, who has granted bioRxiv a license to display the preprint in perpetuity. It is made available under aCC-BY-NC-ND 4.0 International license.

2123

1		5		10		15									
Gln	Phe	Lys	Ile	Asp	Leu	Phe	Ile	Leu	Asn	Arg	Arg	Cys	Leu	Asn	Gly
		20		25		30									
Gln	Glu	Lys	Ser	Asn	Ile	Arg	Met	Tyr	Gly	Met	Trp	Leu	Ser	Ile	Ser
		35		40		45									

<210> 5242
 <211> 173
 <212> PRT
 <213> S.epidermidis

<400> 5242															
Gly	Ile	Pro	Thr	His	Met	Lys	Lys	Asn	His	Asp	Tyr	Met	Arg	Leu	Ala
1			5					10					15		
Ile	Asn	Glu	Ala	His	Lys	Ala	Lys	Ala	Leu	Gly	Glu	Val	Pro	Ile	Gly
		20				25		30							
Ala	Val	Ile	Val	Lys	Glu	Asp	Gln	Val	Ile	Ala	Arg	Ala	His	Asn	Leu
		35				40		45							
Arg	Glu	Thr	Leu	Gln	Gln	Pro	Thr	Ala	His	Ala	Glu	His	Ile	Ala	Ile
		50				55		60							
Glu	Arg	Ala	Ser	Glu	Val	Val	Gly	Ser	Trp	Arg	Leu	Glu	Glu	Cys	Thr
65					70			75						80	
Leu	Tyr	Val	Thr	Leu	Glu	Pro	Cys	Val	Met	Cys	Ala	Gly	Thr	Ile	Ile
				85				90						95	
Met	Ser	Arg	Ile	Pro	Lys	Val	Val	Tyr	Gly	Ala	Thr	Asp	Pro	Lys	Gly
			100					105					110		
Gly	Cys	Ser	Gly	Ser	Leu	Met	Asn	Leu	Leu	Glu	Gln	Pro	Gln	Phe	Asn
		115					120					125			
His	Arg	Ala	Ile	Val	Glu	Lys	Gly	Ile	Leu	Glu	Glu	Cys	Ala	Glu	
		130				135					140				
Leu	Leu	Arg	Ser	Phe	Phe	Lys	Glu	Ile	Arg	Glu	Lys	Lys	Lys	Ala	Glu
145					150					155					160
Lys	Gln	Gly	Lys	Ile	Gln	Lys	Asp	Ile	Asn	Leu	Leu	Lys			
				165					170						

<210> 5243
 <211> 175
 <212> PRT
 <213> S.epidermidis

<400> 5243															
Arg	Met	Ala	Thr	Cys	Ala	Arg	Leu	Cys	Arg	Leu	Tyr	Lys	Lys	Gln	Thr
1			5					10					15		
Gln	Ile	Lys	Gly	Val	Phe	Met	Gly	Leu	Tyr	Glu	Lys	Met	Leu	Ile	Glu
		20					25					30			
His	Asp	Tyr	Ile	Glu	Val	Arg	Glu	Thr	Asp	Val	Met	Pro	Asn	Asp	Leu
		35					40					45			
His	Gly	Leu	Trp	Leu	Gly	Asp	Leu	Ile	Leu	Ile	Lys	Arg	Asn	Leu	Ser
		50				55					60				
Glu	Ile	Arg	Lys	Ala	Glu	Val	Leu	Tyr	Glu	Glu	Leu	Ala	His	His	Lys
65					70					75					80
Leu	Thr	Tyr	Gly	Asn	Ile	Leu	Asp	Gln	Ser	Lys	Phe	Asn	Asn	Arg	Lys
				85				90						95	
Phe	Glu	Asn	Tyr	Ala	Arg	Arg	Tyr	Gly	Tyr	Glu	Thr	Ala	Leu	Pro	Leu
			100					105					110		
Arg	Ile	Ile	Val	Glu	Ala	His	Asn	Tyr	Gly	Val	Ser	Asn	Leu	Tyr	Glu

115	120	125
Leu Ala Glu Tyr Val Gln Leu Ser Glu Glu Tyr Ile Ser Glu Ile Leu		
130	135	140
Lys His Tyr Lys Asn Lys Tyr Gly Ile Gly Thr Asn Tyr Gly Glu Tyr		
145	150	155
Leu Ile Thr Phe Asp Pro Leu Arg Val Phe Lys Tyr Lys Glu Ile		
165	170	175

<210> 5244
 <211> 84
 <212> PRT
 <213> S.epidermidis

<400> 5244
Tyr Ser Lys Thr Thr Leu Phe Ser Phe Asn Lys Ala Ile Ile Asn Phe
1 5 10 15
Ser Gly Tyr Asp Met Leu Val Glu His Thr Trp Gln Lys Lys Pro Cys
20 25 30
Trp Thr Lys Leu Leu Thr Gly Val Val Phe Ser Val Leu Gln Leu Gly
35 40 45
Gln Thr Gln Phe Ile Ser Leu Leu Glu Asn Phe Val Tyr Phe Phe Ala
50 55 60
Ser Leu Thr Ser Phe Lys Lys Gly Lys Thr Phe Phe Ser Leu Tyr Asn
65 70 75 80
Gln Phe Pro Ser

<210> 5245
 <211> 308
 <212> PRT
 <213> S.epidermidis

<400> 5245
Glu Asn Met Thr Arg Gln Gly Tyr Gly Glu Ser Thr Gly Lys Ile Ile
1 5 10 15
Leu Met Gly Glu His Ala Val Thr Phe Gly Gln Pro Ala Ile Ala Ile
20 25 30
Pro Phe Asn Ala Gly Lys Ile Lys Val Leu Ile Glu Ser Leu Asp Glu
35 40 45
Gly Asn Tyr Ser Ser Ile Thr Ser Asp Val Tyr Asp Gly Met Leu Tyr
50 55 60
Asp Ala Pro Glu His Leu Lys Ser Ile Ile Asn Arg Phe Val Glu Lys
65 70 75 80
Ser Gly Val Lys Glu Pro Leu Ser Val Lys Ile Gln Thr Asn Leu Pro
85 90 95
Pro Ser Arg Gly Leu Gly Ser Ser Ala Ala Val Ala Val Ala Phe Val
100 105 110
Arg Ala Ser Tyr Asp Phe Met Asp Gln Pro Leu Asp Asp Lys Thr Leu
115 120 125
Ile Lys Glu Ala Asn Trp Ala Glu Gln Ile Ala His Gly Lys Pro Ser
130 135 140
Gly Ile Asp Thr Gln Thr Ile Val Ser Asn Lys Pro Val Trp Phe Lys
145 150 155 160
Gln Gly Gln Ala Glu Thr Leu Lys Ser Leu Lys Leu Asn Gly Tyr Met
165 170 175
Val Val Ile Asp Thr Gly Val Lys Gly Ser Thr Lys Gln Ala Val Glu

	180		185		190										
Asp	Val	His	Val	Leu	Cys	Glu	Ser	Asp	Glu	Tyr	Met	Lys	Tyr	Ile	Glu
	195						200					205			
His	Ile	Gly	Thr	Leu	Val	His	Ser	Ala	Ser	Glu	Ser	Ile	Glu	Gln	His
	210					215						220			
Asp	Phe	His	His	Leu	Ala	Asp	Ile	Phe	Asn	Ala	Cys	Gln	Glu	Asp	Leu
225					230					235					240
Arg	His	Leu	Thr	Val	Ser	His	Asp	Lys	Ile	Glu	Lys	Leu	Leu	Gln	Ile
			245						250					255	
Gly	Lys	Glu	His	Gly	Ala	Ile	Ala	Gly	Lys	Leu	Thr	Gly	Gly	Gly	Arg
		260						265					270		
Gly	Gly	Ser	Met	Leu	Leu	Leu	Ala	Glu	Asn	Leu	Lys	Thr	Ala	Lys	Thr
	275						280						285		
Ile	Val	Ala	Ala	Val	Glu	Lys	Ala	Gly	Ala	Ala	His	Thr	Trp	Ile	Glu
	290					295					300				
His	Leu	Gly	Gly												
305															

<210> 5246

<211> 69

<212> PRT

<213> S.epidermidis

<400> 5246

Pro	Gln	Met	Thr	Leu	Gly	Asn	Arg	Ile	Lys	Gln	His	Arg	Gln	Asp	Lys
1				5					10					15	
Gly	Leu	Asn	Met	Arg	Glu	Phe	Gly	Glu	Phe	Ile	Asp	Asn	Ala	Ser	Asp
		20					25						30		
Ser	Ile	Val	Ser	Arg	Trp	Glu	Arg	Asn	Ile	Ser	Val	Pro	Asn	Ala	Lys
	35					40						45			
Arg	Leu	Lys	Leu	Ile	Ala	Asp	Asp	Met	Asn	Ile	Thr	Val	Thr	Glu	Leu
	50					55					60				
Leu	Lys	Gly	Val	Lys											
65															

<210> 5247

<211> 146

<212> PRT

<213> S.epidermidis

<400> 5247

Tyr	Thr	Met	Thr	Lys	Leu	Asn	Leu	Lys	Gln	Gln	Ala	Phe	Val	Asp	Glu
1				5					10					15	
Tyr	Ile	Lys	Thr	Gly	Thr	Ala	Tyr	Gln	Ser	Ala	Ile	Arg	Ala	Gly	Tyr
		20					25						30		
Ser	Glu	Lys	Tyr	Ala	Lys	Ser	Ser	Ser	His	Lys	Leu	Leu	Glu	Asn	Val
	35					40						45			
Gly	Ile	Lys	Ala	Glu	Ile	Asp	Lys	Arg	Met	Glu	Lys	Leu	Lys	Lys	Asp
	50					55					60				
Ser	Ile	Ala	Asp	Gln	Asp	Glu	Ile	Leu	Gln	Tyr	Leu	Thr	Ser	Val	Leu
65				70					75					80	
Arg	Gly	Glu	Val	Thr	Asp	Gln	Glu	Leu	Ile	Pro	Ile	Gln	Val	Gly	Arg
			85						90					95	
Gly	Glu	Met	Glu	Val	Glu	Glu	Leu	Glu	Lys	Arg	Ser	Asp	Thr	Asn	Ala
		100						105					110		
Arg	Thr	Lys	Ala	Ala	Glu	Leu	Leu	Gly	Lys	Arg	Tyr	Met	Met	Trp	Thr

115 120 125
 Asp Lys Gln Gln Ile Glu Thr Thr Ala Met Val His Phe Asp Asp Asp
 130 135 140
 Ile Asn
 145

<210> 5248
 <211> 67
 <212> PRT
 <213> S.epidermidis

<400> 5248
 Pro Pro Thr Ala Phe Val Pro Asn Ala Ile Gly Lys Thr Leu Thr Ser
 1 5 10 15
 Asp Leu Pro Asn Arg Thr Cys Phe Thr Ile Lys Ser His Leu Leu Tyr
 20 25 30
 Leu Lys Tyr Leu Asn Ile Leu Tyr Pro Asn His Asn Leu Phe Ile His
 35 40 45
 Val Asn Tyr Leu Leu Glu Ala Ser Ile Leu Thr Leu Lys Ser Leu Tyr
 50 55 60
 Ala Leu Met
 65

<210> 5249
 <211> 248
 <212> PRT
 <213> S.epidermidis

<400> 5249
 Tyr Thr Tyr Ala Tyr Gly Cys Thr Ala Phe Cys Tyr Ser Gly Lys Glu
 1 5 10 15
 Thr Thr Ser Cys Leu Gly Phe Glu Tyr Gly Gly Leu Ile Asn Thr Leu
 20 25 30
 Glu Ala Ala Arg Arg Tyr Gln Leu Lys Tyr Phe Thr Pro Ser Ser Ile
 35 40 45
 Gly Ala Phe Gly Ile Ser Thr Pro Lys Val Asn Thr Pro Gln Leu Thr
 50 55 60
 Ile Gln Gln Pro Thr Thr Met Tyr Gly Ile Asn Lys Val Thr Gly Glu
 65 70 75 80
 Leu Leu Cys Gln Tyr Tyr Tyr Val Lys Phe Gly Val Asp Thr Arg Ser
 85 90 95
 Val Arg Phe Pro Gly Leu Ile Ser His Val Lys Glu Pro Gly Gly Gly
 100 105 110
 Ile Thr Asp Tyr Ala Val Asp Met Tyr Phe Lys Ala Val Arg Lys Gly
 115 120 125
 His Tyr Thr Ser Tyr Ile Asn Arg Tyr Thr Tyr Met Asp Met Met Tyr
 130 135 140
 Met Glu Asp Ala Ile Asp Ala Ile Ile Lys Leu Met Glu Glu Asp Ser
 145 150 155 160
 Val Lys Leu Lys Thr Arg Asn Gly Tyr Asn Leu Ser Ala Met Ser Ile
 165 170 175
 Glu Pro Glu Met Leu Lys Gln Ala Ile Gln Val Tyr Tyr Pro Asp Phe
 180 185 190
 Thr Leu Asp Tyr Asp Ile Asp Leu Glu Arg Gln Asp Ile Ala Leu Ser
 195 200 205
 Trp Pro Asp Ser Ile Asp Thr Ser Cys Ala Gln Glu Glu Trp Gly Phe

210		215		220
Asp Pro Lys Tyr Asp	Leu Pro Thr Met Thr Lys	Val Met Leu Glu Ala		
225	230	235		240
Ile Glu Lys Lys Gln	Lys Glu Cys			
	245			

<210> 5250
 <211> 42
 <212> PRT
 <213> S.epidermidis

<400> 5250
 Thr Gly Ser Ala Ser Lys Ser Ala Arg Asn Ala Ile Val Gly Pro Phe
 1 5 10 15
 Glu Ser Asp Pro Leu Lys Val Ala Phe Ile Pro Leu Arg Pro Thr Gly
 20 25 30
 Val Ser Met Val His Ala Asn Trp Leu Asn
 35 40

<210> 5251
 <211> 118
 <212> PRT
 <213> S.epidermidis

<400> 5251
 Met Glu Ile Ala Lys Met Arg Val Lys Asn Lys Tyr Phe Ser Ile Thr
 1 5 10 15
 Pro Asn Val Val Glu Lys Met Lys Glu Ala Asp Ile Asn Pro Asp Ile
 20 25 30
 Leu Arg Gln Arg Leu Ala Ser Gly Trp Lys Phe Glu Asp Ala Ile Glu
 35 40 45
 Ala Pro Leu Gly Val Arg Arg Ser Glu Trp Asp Ser Leu Lys Pro Lys
 50 55 60
 Glu Asp Gly Ile Ala Ser Tyr Lys Glu Arg Met Ala Gln Arg Arg Leu
 65 70 75 80
 Gln Glu Leu Lys Arg Lys Lys Pro His Leu Phe Thr Val Pro Gln Lys
 85 90 95
 His Pro Arg Ser Glu Trp Cys Thr Tyr Leu Met Glu Asn Asp Ile Phe
 100 105 110
 Pro Arg Lys Val Ala Lys
 115

<210> 5252
 <211> 105
 <212> PRT
 <213> S.epidermidis

<400> 5252
 Val Met Asn Ala Gln Asp Val Lys Ile Leu Asn Asn Leu Ser Leu Asp
 1 5 10 15
 Asp Thr Ser Asn Asp Glu Thr Ile Glu Leu Leu Ile Glu Lys Tyr Leu
 20 25 30
 Asn Val Ala Glu Glu Tyr Cys Asn Gln Thr Phe Asn Arg Gln Ser Leu
 35 40 45
 Pro Ser Asn Val Glu Lys Phe Ile Ala Asn Cys Ile Lys Gln Gly Thr
 50 55 60

<211> 342
 <212> PRT
 <213> S.epidermidis

<400> 5255

```

Lys Val Arg Ala Arg Cys Leu Met Met Ser Asn Ile His Thr Asn Ile
1      5      10      15
Ser Glu Trp Met Lys Met Ser Glu Glu Thr Pro Val Ile Ile Ser Ser
20      25      30
Arg Ile Arg Leu Ala Arg Asn Leu Glu Asn His Val His Pro Leu Met
35      40      45
Phe Pro Ser Glu Gln Glu Gly Tyr Arg Val Ile Asn Glu Val Gln Asp
50      55      60
Ala Leu Ser Asn Leu Thr Leu Asn Arg Leu Asp Thr Met Asp Gln Gln
65      70      75      80
Ser Lys Met Lys Leu Val Ala Lys His Leu Val Ser Pro Glu Leu Val
85      90      95
Lys Gln Pro Ala Ser Ala Val Met Leu Asn Asp Asp Glu Ser Val Ser
100     105     110
Val Met Ile Asn Glu Glu Asp His Ile Arg Ile Gln Ala Leu Gly Thr
115     120     125
Asp Leu Ser Leu Lys Asp Leu Tyr Gln Arg Ala Ser Lys Ile Asp Asp
130     135     140
Glu Leu Asp Lys Ala Leu Asp Ile Ser Tyr Asp Glu His Leu Gly Tyr
145     150     155     160
Leu Thr Thr Cys Pro Thr Asn Ile Gly Thr Gly Met Arg Ala Ser Val
165     170     175
Met Leu His Leu Pro Gly Leu Ser Ile Met Lys Arg Met Asn Arg Ile
180     185     190
Ala Gln Thr Ile Asn Arg Phe Gly Phe Thr Ile Arg Gly Ile Tyr Gly
195     200     205
Glu Gly Ser Gln Val Tyr Gly His Ile Tyr Gln Val Ser Asn Gln Leu
210     215     220
Thr Leu Gly Lys Thr Glu Glu Asp Ile Ile Asp Asn Leu Thr Glu Val
225     230     235     240
Val Asn Gln Ile Ile Asn Glu Glu Lys Gln Ile Arg Glu Arg Leu Asp
245     250     255
Lys His Asn Ser Val Glu Thr Leu Asp Arg Val Tyr Arg Ser Leu Gly
260     265     270
Val Leu Gln Asn Ser Arg Ile Ile Ser Met Glu Glu Ala Ser Tyr Arg
275     280     285
Leu Ser Glu Val Lys Leu Gly Ile Asp Leu Asn Tyr Ile Leu Leu Glu
290     295     300
Asn Phe Lys Phe Asn Glu Leu Met Val Ala Ile Gln Ser Pro Phe Leu
305     310     315     320
Ile Asp Asp Asp Asp Asn Arg Thr Val Asn Glu Lys Arg Ala Asp Leu
325     330     335
Leu Arg Glu His Ile Lys
340

```

<210> 5256
 <211> 1185
 <212> PRT
 <213> S.epidermidis

<400> 5256

Ile	Cys	Leu	Ala	Gly	Gln	Val	Val	Gln	Tyr	Gly	Arg	His	Arg	Lys	Arg
1				5					10					15	
Arg	Asn	Tyr	Ala	Arg	Ile	Ser	Glu	Val	Leu	Glu	Leu	Pro	Asn	Leu	Ile
			20					25					30		
Glu	Ile	Gln	Thr	Lys	Ser	Tyr	Asp	Trp	Phe	Leu	Lys	Glu	Gly	Leu	Leu
		35					40					45			
Glu	Met	Phe	Arg	Asp	Ile	Ser	Pro	Ile	Glu	Asp	Phe	Thr	Gly	Asn	Leu
	50					55					60				
Ser	Leu	Glu	Phe	Val	Asp	Tyr	Arg	Leu	Gly	Glu	Pro	Lys	Tyr	Asp	Leu
65					70					75					80
Glu	Glu	Ser	Lys	Asn	Arg	Asp	Ala	Thr	Tyr	Ala	Ala	Pro	Leu	Arg	Val
				85					90					95	
Lys	Val	Arg	Leu	Ile	Ile	Lys	Glu	Thr	Gly	Glu	Val	Lys	Glu	Gln	Glu
			100					105					110		
Val	Phe	Met	Gly	Asp	Phe	Pro	Leu	Met	Thr	Asp	Thr	Gly	Thr	Phe	Val
		115					120					125			
Ile	Asn	Gly	Ala	Glu	Arg	Val	Ile	Val	Ser	Gln	Leu	Val	Arg	Ser	Pro
	130					135					140				
Ser	Val	Tyr	Phe	Asn	Glu	Lys	Ile	Asp	Lys	Asn	Gly	Arg	Glu	Asn	Tyr
145					150					155					160
Asp	Ala	Thr	Ile	Ile	Pro	Asn	Arg	Gly	Ala	Trp	Leu	Glu	Tyr	Glu	Thr
				165					170					175	
Asp	Ala	Lys	Asp	Val	Val	Tyr	Val	Arg	Ile	Asp	Arg	Thr	Arg	Lys	Leu
			180					185					190		
Pro	Leu	Thr	Val	Leu	Leu	Arg	Ala	Leu	Gly	Phe	Ser	Thr	Asp	Gln	Glu
		195					200					205			
Ile	Val	Asp	Leu	Leu	Gly	Asp	Ser	Glu	Tyr	Leu	Arg	Asn	Thr	Leu	Glu
	210					215					220				
Lys	Asp	Gly	Thr	Glu	Asn	Thr	Glu	Gln	Ala	Leu	Leu	Glu	Ile	Tyr	Glu
225					230					235					240
Arg	Leu	Arg	Pro	Gly	Glu	Pro	Pro	Thr	Val	Glu	Asn	Ala	Lys	Ser	Leu
				245					250					255	
Leu	Tyr	Ser	Arg	Phe	Phe	Asp	Pro	Lys	Arg	Tyr	Asp	Leu	Ala	Ser	Val
			260					265					270		
Gly	Arg	Tyr	Lys	Ala	Asn	Lys	Lys	Leu	His	Leu	Lys	His	Arg	Leu	Phe
		275					280					285			
Asn	Gln	Lys	Leu	Ala	Glu	Pro	Ile	Val	Asn	Ser	Glu	Thr	Gly	Glu	Ile
	290					295					300				
Val	Val	Asp	Glu	Gly	Thr	Val	Leu	Asp	Arg	Arg	Lys	Leu	Asp	Glu	Ile
305					310					315					320
Met	Asp	Val	Leu	Glu	Thr	Asn	Ala	Asn	Ser	Glu	Val	Phe	Glu	Leu	Glu
				325					330				335		
Gly	Ser	Val	Ile	Asp	Glu	Pro	Val	Glu	Ile	Gln	Ser	Ile	Lys	Val	Tyr
		340						345					350		
Val	Pro	Asn	Asp	Glu	Glu	Gly	Arg	Thr	Thr	Thr	Val	Ile	Gly	Asn	Ala
		355					360					365			
Leu	Pro	Asp	Ser	Glu	Val	Lys	Cys	Ile	Thr	Pro	Ala	Asp	Ile	Val	Ala
	370					375					380				
Ser	Met	Ser	Tyr	Phe	Phe	Asn	Leu	Leu	Asn	Gly	Ile	Gly	Tyr	Thr	Asp
385					390					395					400
Asp	Ile	Asp	His	Leu	Gly	Asn	Arg	Arg	Leu	Arg	Ser	Val	Gly	Glu	Leu
				405					410					415	
Leu	Gln	Asn	Gln	Phe	Arg	Ile	Gly	Leu	Ser	Arg	Met	Glu	Arg	Val	Val
		420						425					430		
Arg	Glu	Arg	Met	Ser	Ile	Gln	Asp	Thr	Asp	Ser	Ile	Thr	Pro	Gln	Gln
		435					440					445			

Leu	Ile	Asn	Ile	Arg	Pro	Val	Ile	Ala	Ser	Ile	Lys	Glu	Phe	Phe	Gly
450						455					460				
Ser	Ser	Gln	Leu	Ser	Gln	Phe	Met	Asp	Gln	Ala	Asn	Pro	Leu	Ala	Glu
465					470					475					480
Leu	Thr	His	Lys	Arg	Arg	Leu	Ser	Ala	Leu	Gly	Pro	Gly	Gly	Leu	Thr
				485					490					495	
Arg	Glu	Arg	Ala	Gln	Met	Glu	Val	Arg	Asp	Val	His	Tyr	Ser	His	Tyr
			500					505					510		
Gly	Arg	Met	Cys	Pro	Ile	Glu	Thr	Pro	Glu	Gly	Pro	Asn	Ile	Gly	Leu
		515					520					525			
Ile	Asn	Ser	Leu	Ser	Ser	Tyr	Ala	Arg	Val	Asn	Glu	Phe	Gly	Phe	Ile
	530					535					540				
Glu	Thr	Pro	Tyr	Arg	Lys	Val	Asp	Leu	Asp	Thr	Asn	Ser	Ile	Thr	Asp
545					550					555					560
Gln	Ile	Asp	Tyr	Leu	Thr	Ala	Asp	Glu	Glu	Asp	Ser	Tyr	Val	Val	Ala
				565					570					575	
Gln	Ala	Asn	Ser	Arg	Leu	Asp	Glu	Asn	Gly	Arg	Phe	Leu	Asp	Asp	Glu
			580					585					590		
Val	Val	Cys	Arg	Phe	Arg	Gly	Asn	Asn	Thr	Val	Met	Ala	Lys	Glu	Lys
		595					600					605			
Met	Asp	Tyr	Met	Asp	Val	Ser	Pro	Lys	Gln	Val	Val	Ser	Ala	Ala	Thr
	610					615					620				
Ala	Cys	Ile	Pro	Phe	Leu	Glu	Asn	Asp	Asp	Ser	Asn	Arg	Ala	Leu	Met
625					630					635					640
Gly	Ala	Asn	Met	Gln	Arg	Gln	Ala	Val	Pro	Leu	Met	Ile	Pro	Glu	Ala
				645					650					655	
Pro	Phe	Val	Gly	Thr	Gly	Met	Glu	His	Val	Ala	Ala	Arg	Asp	Ser	Gly
			660					665					670		
Ala	Ala	Ile	Thr	Ala	Lys	His	Arg	Gly	Arg	Val	Glu	His	Val	Glu	Ser
		675					680					685			
Asn	Glu	Ile	Leu	Val	Arg	Arg	Leu	Val	Glu	Glu	Asn	Gly	Thr	Glu	His
	690					695					700				
Glu	Gly	Glu	Leu	Asp	Arg	Tyr	Pro	Leu	Ala	Lys	Phe	Lys	Arg	Ser	Asn
705					710					715					720
Ser	Gly	Thr	Cys	Tyr	Asn	Gln	Arg	Pro	Ile	Val	Ser	Ile	Gly	Asp	Val
				725					730					735	
Val	Glu	Tyr	Asn	Glu	Ile	Leu	Ala	Asp	Gly	Pro	Ser	Met	Glu	Leu	Gly
			740					745					750		
Glu	Met	Ala	Leu	Gly	Arg	Asn	Val	Val	Val	Gly	Phe	Met	Thr	Trp	Asp
	755						760				765				
Gly	Tyr	Asn	Tyr	Glu	Asp	Ala	Val	Ile	Met	Ser	Glu	Arg	Leu	Val	Lys
	770					775					780				
Asp	Asp	Val	Tyr	Thr	Ser	Ile	His	Ile	Glu	Glu	Tyr	Glu	Ser	Glu	Ala
785					790					795					800
Arg	Asp	Thr	Lys	Leu	Gly	Pro	Glu	Glu	Ile	Thr	Arg	Asp	Ile	Pro	Asn
				805					810					815	
Val	Ser	Glu	Ser	Ala	Leu	Lys	Asn	Leu	Asp	Asp	Arg	Gly	Ile	Val	Tyr
			820					825					830		
Val	Gly	Ala	Glu	Val	Lys	Asp	Gly	Asp	Ile	Leu	Val	Gly	Lys	Val	Thr
	835						840					845			
Pro	Lys	Gly	Val	Thr	Glu	Leu	Thr	Ala	Glu	Glu	Arg	Leu	Leu	His	Ala
	850					855					860				
Ile	Phe	Gly	Glu	Lys	Ala	Arg	Glu	Val	Arg	Asp	Thr	Ser	Leu	Arg	Val
865					870					875					880
Pro	His	Gly	Ala	Gly	Gly	Ile	Val	Leu	Asp	Val	Lys	Val	Phe	Asn	Arg
				885					890					895	

Glu Glu Gly Asp Asp Thr Leu Ser Pro Gly Val Asn Gln Leu Val Arg
 900 905 910
 Val Tyr Ile Val Gln Lys Arg Lys Ile His Val Gly Asp Lys Met Cys
 915 920 925
 Gly Arg His Gly Asn Lys Gly Val Ile Ser Lys Ile Val Pro Glu Glu
 930 935 940
 Asp Met Pro Tyr Leu Pro Asp Gly Arg Pro Ile Asp Ile Met Leu Asn
 945 950 955 960
 Pro Leu Gly Val Pro Ser Arg Met Asn Ile Gly Gln Val Leu Glu Leu
 965 970 975
 His Leu Gly Met Ala Ala Lys Asn Leu Gly Ile His Val Ala Ser Pro
 980 985 990
 Val Phe Asp Gly Ala Asn Asp Asp Val Trp Ser Thr Ile Glu Glu
 995 1000 1005
 Ala Gly Met Ala Arg Asp Gly Lys Thr Val Leu Tyr Asp Gly Arg Thr
 1010 1015 1020
 Gly Glu Pro Phe Asp Asn Arg Ile Ser Val Gly Val Met Tyr Met Leu
 1025 1030 1035 1040
 Lys Leu Ala His Met Val Asp Asp Lys Leu His Ala Arg Ser Thr Gly
 1045 1050 1055
 Pro Tyr Ser Leu Val Thr Gln Gln Pro Leu Gly Gly Lys Ala Gln Phe
 1060 1065 1070
 Gly Gly Gln Arg Phe Gly Glu Met Glu Val Trp Ala Leu Glu Ala Tyr
 1075 1080 1085
 Gly Ala Ala Tyr Thr Leu Gln Glu Ile Leu Thr Tyr Lys Ser Asp Asp
 1090 1095 1100
 Thr Val Gly Arg Val Lys Thr Tyr Glu Ser Ile Val Lys Gly Glu Asn
 1105 1110 1115 1120
 Ile Ser Arg Pro Ser Val Pro Glu Ser Phe Arg Val Leu Met Lys Glu
 1125 1130 1135
 Leu Gln Ser Leu Gly Leu Asp Val Lys Val Met Asp Glu His Asp Asn
 1140 1145 1150
 Glu Ile Glu Met Ala Asp Val Asp Asp Glu Asp Ala Ala Glu Arg Lys
 1155 1160 1165
 Val Asp Leu Gln Gln Lys Ser Ala Pro Glu Ser Gln Lys Glu Thr Thr
 1170 1175 1180
 Asp
 1185

<210> 5257

<211> 61

<212> PRT

<213> S.epidermidis

<400> 5257

Leu Ser Gln Ala Phe Tyr Leu Leu Ala Ile Asp Asn Arg Val Glu Leu
 1 5 10 15
 Gly Leu Ile Ser Ile Phe Asn Ser Ser Pro His Tyr Gln Val Arg Gln
 20 25 30
 Arg Ile Thr Tyr Ala Phe Tyr Leu Thr Leu Leu Asn Leu Ile Phe Asn
 35 40 45
 Val Ile Ile Val Val Thr Gln Tyr Ala Lys Leu Lys Leu
 50 55 60

<210> 5258

<211> 173

<212> PRT

<213> S.epidermidis

<400> 5258

```

Met Asp Phe Leu Gln Gln Asn Trp Thr Asn Ile Leu Lys Ile Ile Val
1          5          10          15
Ser Leu Ile Ser Ile Val Thr Phe Ile Arg Val Phe Leu Tyr Glu Arg
20          25          30
Ser Arg Leu Lys Val Asn Ile Ile Gly Tyr Asp Gln Ile Glu Glu Tyr
35          40          45
Leu Asp Val Tyr Ile Ser Phe Ser Asn Ser Ser Lys Leu Pro Ile Ser
50          55          60
Ile Asn Glu Ile Gln Ile Phe His Lys Asn Thr Met Ile Gly Glu Ile
65          70          75          80
Glu Asn Phe Thr Glu Lys Ile Leu Gly Gln Thr Asp Gly Lys Ser Ile
85          90          95
Val Tyr Ser Asn Pro Met Pro Leu Asn Leu Asn Ser Tyr Ser Ser Asp
100         105         110
Lys Asp Leu Phe Arg Ile Lys Leu Val Glu Glu Leu Pro Leu Asn Lys
115         120         125
Thr Leu Thr Phe Lys Phe Ile Thr Thr Arg Lys Asn Ile Thr Tyr Lys
130         135         140
Ile Lys Asp Phe Lys Leu Pro Gln Tyr Arg Arg Ser Phe His Arg Lys
145         150         155         160
Leu Lys His His Lys Lys Val Ser Asn Lys Asn Lys Asp
165         170

```

<210> 5259

<211> 291

<212> PRT

<213> S.epidermidis

<400> 5259

```

Leu Ile Tyr Tyr Tyr Ser Cys Ser Ser Phe Thr Ile Met Asp Leu Ala
1          5          10          15
Thr Lys Tyr Phe Asn Gln Ile Asn Trp Arg Tyr Val Asp His Ser Ser
20          25          30
Gly Leu Glu Pro Met Gln Ser Phe Ala Phe Asp Asp Thr Phe Ser Glu
35          40          45
Ser Val Gly Lys Asp Leu Ser Cys Asn Val Val Arg Thr Trp Ile His
50          55          60
Gln His Thr Val Ile Leu Gly Ile His Asp Ser Arg Leu Pro Phe Leu
65          70          75          80
Ser Asp Gly Ile Arg Phe Leu Thr Asp Glu Gln Gly Tyr Asn Ala Ile
85          90          95
Val Arg Asn Ser Gly Gly Leu Gly Val Val Leu Asp Gln Gly Ile Leu
100         105         110
Asn Ile Ser Leu Ile Phe Lys Gly Gln Thr Glu Thr Thr Ile Asp Glu
115         120         125
Ala Phe Thr Val Met Tyr Leu Leu Ile Asn Lys Met Phe Glu Asp Glu
130         135         140
Asp Val Ser Ile Asp Thr Lys Glu Ile Glu Gln Ser Tyr Cys Pro Gly
145         150         155         160
Lys Phe Asp Leu Ser Ile Asn Asp Lys Lys Phe Ala Gly Ile Ser Gln
165         170         175
Arg Arg Val Arg Gly Gly Ile Ala Val Gln Ile Tyr Leu Cys Ile Glu

```

			180					185					190				
Gly	Ser	Gly	Ser	Glu	Arg	Ala	Leu	Met	Met	Gln	Gln	Phe	Tyr	Gln	Arg		
		195					200					205					
Ala	Leu	Lys	Gly	Glu	Thr	Thr	Lys	Phe	His	Tyr	Pro	Asp	Ile	Asp	Pro		
	210					215					220						
Ser	Cys	Met	Ala	Ser	Leu	Glu	Thr	Leu	Leu	Asn	Arg	Glu	Ile	Lys	Val		
225					230					235					240		
Gln	Asp	Val	Met	Phe	Leu	Leu	Leu	Tyr	Ala	Leu	Lys	Asp	Leu	Gly	Ala		
				245					250					255			
Asn	Leu	Asn	Met	Asp	Pro	Ile	Thr	Glu	Asp	Glu	Trp	Thr	Arg	Tyr	Glu		
			260					265					270				
Gly	Tyr	Tyr	Asp	Lys	Met	Leu	Glu	Arg	Asn	Ala	Lys	Met	Asn	Glu	Lys		
		275					280					285					
Leu	Asp	Phe															
	290																

<210> 5260

<211> 256

<212> PRT

<213> S.epidermidis

<400> 5260

His	Glu	Tyr	Tyr	Cys	Asn	Arg	Val	Thr	Glu	Arg	Ser	Glu	Ile	Met	Ala		
1				5					10					15			
Val	Phe	Arg	Val	Tyr	Lys	Glu	Thr	Gly	Asn	Phe	Val	Thr	Val	His	Lys		
			20					25					30				
Asn	Phe	Ile	His	Asp	Asp	Asn	Leu	Ser	Trp	Lys	Ala	Lys	Gly	Ile	Leu		
		35					40					45					
Leu	Tyr	Leu	Leu	Ser	Arg	Pro	Asp	Asp	Trp	Gln	Ile	Tyr	Glu	Ser	Glu		
	50					55					60						
Leu	Val	Arg	His	Ser	Thr	Asp	Gly	Leu	Ser	Gly	Leu	Lys	Thr	Gly	Ile		
65					70					75					80		
Lys	Glu	Leu	Glu	Lys	Val	Gly	Tyr	Ile	Gln	Arg	Thr	Arg	Lys	Arg	Asp		
				85					90					95			
Asp	Lys	Gly	Arg	Leu	Lys	Glu	Tyr	Glu	Tyr	Ala	Val	Tyr	Glu	Lys	Pro		
			100					105					110				
Asn	His	Ile	Arg	Phe	Ser	Asn	Val	Gly	Lys	Thr	Tyr	Ile	Gly	Lys	Thr		
		115					120					125					
Tyr	Val	Gly	Glu	Ser	His	Thr	Thr	Asn	Asn	Asn	Ser	Thr	Asn	Asn	Asp		
	130					135					140						
Leu	Thr	Asn	Asn	Lys	Asn	Thr	Asn	Asn	Val	Thr	Asp	Glu	Thr	Ser	Lys		
145					150					155					160		
Ser	Phe	Gln	Tyr	Ile	Ser	Asn	Asn	Leu	Glu	Ile	Ile	Gln	Ser	Pro	Leu		
				165					170					175			
Lys	Ala	Gln	Gln	Leu	Glu	Glu	Ala	Ile	Lys	Asp	Phe	Lys	Asp	Asn	Lys		
			180					185					190				
Leu	Glu	Ile	Val	Thr	Val	Ala	Thr	Asp	Tyr	Cys	Lys	Glu	Asn	Asn	Lys		
	195						200					205					
Gly	Ile	Asn	Tyr	Leu	Ile	Lys	Val	Leu	Glu	Asn	Trp	Ser	Lys	Asp	Gly		
	210					215					220						
Val	Asp	Thr	Lys	Glu	Lys	Ala	Ile	Ser	Lys	Val	Lys	Pro	Arg	Asn	Asn		
225					230					235					240		
Lys	Glu	Asp	Asn	Tyr	Leu	Ala	Lys	Lys	Lys	Gln	Glu	Leu	Leu	Gly	Gly		
				245					250					255			

<210> 5261

<211> 274
 <212> PRT
 <213> S.epidermidis

<400> 5261

Asn	Leu	Tyr	Tyr	Asn	Tyr	Asn	Asn	Asp	Leu	Phe	Leu	Ile	Leu	Lys	Lys
1				5					10					15	
Phe	Gly	Asp	Glu	Met	Asn	Lys	Asp	Thr	Ile	Glu	Thr	Ser	Arg	Glu	Ala
		20						25					30		
Leu	Ile	Lys	Asp	Val	Val	Met	Ile	Ala	Ala	Arg	Ile	Leu	Leu	Glu	Ser
		35					40					45			
Gly	Ala	Glu	Gly	Thr	Arg	Val	Glu	Asp	Thr	Met	Ala	Arg	Ile	Ala	Thr
	50					55					60				
Lys	Leu	Gly	Tyr	Pro	Glu	Ser	Asn	Ser	Phe	Val	Thr	Asn	Thr	Val	Ile
65					70					75					80
Glu	Phe	Val	Leu	His	Asn	Glu	Ala	Tyr	Pro	Arg	Leu	Tyr	Arg	Ile	Lys
				85					90					95	
Thr	Arg	Asp	Thr	Asn	Leu	Ile	Lys	Ile	Ser	Gln	Ala	Asn	Glu	Ile	Ser
			100					105					110		
Arg	Gln	Ile	Thr	Asn	Gly	Thr	Met	Thr	Leu	Glu	Glu	Ala	Lys	Tyr	Gln
		115					120					125			
Leu	Glu	Glu	Ile	Tyr	Val	Ala	Lys	Arg	Asp	Ser	Ser	Leu	Pro	Phe	Lys
	130					135					140				
Gly	Ile	Ala	Ala	Ala	Ile	Ile	Ala	Thr	Ser	Phe	Leu	Tyr	Leu	Gln	Gly
145					150					155					160
Gly	Arg	Leu	Val	Asp	Ile	Ile	Thr	Ala	Val	Leu	Ala	Gly	Thr	Ile	Gly
			165					170						175	
Tyr	Leu	Val	Val	Glu	Ile	Leu	Asp	Arg	Lys	Leu	His	Ala	Gln	Phe	Ile
			180					185					190		
Pro	Glu	Phe	Ile	Gly	Ser	Leu	Val	Ile	Gly	Ile	Ile	Ser	Val	Ile	Gly
		195					200					205			
His	Ala	Phe	Val	Pro	Ser	Gly	Asp	Leu	Ala	Thr	Ile	Ile	Ile	Ala	Ala
	210					215					220				
Val	Met	Pro	Ile	Val	Pro	Gly	Val	Leu	Ile	Thr	Asn	Ala	Ile	Gln	Asp
225					230					235					240
Leu	Phe	Gly	Gly	His	Met	Leu	Met	Phe	Thr	Thr	Lys	Ser	Leu	Glu	Ala
				245					250					255	
Leu	Val	Thr	Ala	Phe	Gly	Ile	Gly	Ala	Gly	Val	Ser	Ser	Ile	Leu	Ile
			260					265					270		
Leu	Val														

<210> 5262
 <211> 501
 <212> PRT
 <213> S.epidermidis

<400> 5262

Ile	Met	Tyr	Tyr	Phe	Val	Gly	Asn	Asn	Ile	Gly	His	Lys	Thr	Ala	Gly
1				5					10					15	
Ile	Glu	Lys	Ala	Met	Ile	Asn	Arg	Leu	Asn	Leu	Phe	Lys	Ala	Tyr	His
			20					25					30		
Tyr	Gln	Ala	Lys	Ile	Leu	Leu	Leu	Ala	Trp	Asn	Arg	Tyr	Leu	Thr	Gln
		35					40					45			
Thr	Ala	Ser	Gln	Tyr	Ile	Asn	Ser	Glu	Asp	Tyr	Ile	Asn	Met	Tyr	Asp
	50					55					60				

Tyr Phe Gln Glu Ala Ser Asn Val Thr Ser Val Phe Ser Lys Asn Trp
 65 70 75 80
 Ile His Tyr Trp Arg Asn Glu Cys Gly Tyr Thr Ile Lys Pro Val Ser
 85 90 95
 Glu Thr Asn Asp Val Arg Ile Tyr Asp Gln Gln Gln Phe Ile Met Tyr
 100 105 110
 Ala His Phe Ala Asp Glu Ala Tyr Gln Lys Ile Asp Tyr Ile Asn Tyr
 115 120 125
 Phe Asp Thr Ser Arg Arg Lys Ile Lys Arg Glu Leu Tyr Asp Thr Arg
 130 135 140
 Gly Phe Leu Ser Cys Val Arg Val Leu Ser Thr Asp Gln Lys Ile Gln
 145 150 155 160
 Ala Glu Tyr Tyr Leu Ser Pro Gln Gly Asn Val Lys Ile Glu Lys Tyr
 165 170 175
 Tyr Asp Ile Asn Ser Asn His Pro Tyr Val Ala Lys Lys Ile Ile Leu
 180 185 190
 Asn His Leu Gly Lys Thr His Phe Leu Asn Asn Glu Thr Glu Leu Gly
 195 200 205
 Ala Phe Phe Ile Glu Thr Ile Tyr Gln Ser Ser Asp Leu Phe Phe Ser
 210 215 220
 Asp Arg Asn Leu Val Thr Ser His Ile Phe Asn Ile Val Ala Ser Tyr
 225 230 235 240
 Ile Pro Val Ile Ala Val Leu His Ser Thr His Val Lys Asp Val Thr
 245 250 255
 Asp Leu Thr His Ser Pro Ile Lys Asn Val Tyr Lys Gly Val Phe Glu
 260 265 270
 His Leu Gln Arg Tyr Lys Ala Ile Ile Val Ser Thr Gln Gln Gln Lys
 275 280 285
 Ala Asp Val Ile Glu Arg Ile Arg Gly Val Ile Pro Val Tyr Ala Ile
 290 295 300
 Pro Val Gly Tyr Ser Ser Phe Glu Met Asn Asp Ser Asn Lys Asn
 305 310 315 320
 Asn Tyr Val Ser Pro Lys Lys Ile Ile Ser Val Ala Arg Tyr Ser Pro
 325 330 335
 Glu Lys Gln Leu Ile Gln Gln Ile Glu Leu Ile Asn Arg Leu Lys Asp
 340 345 350
 Thr Phe Pro Asn Ile Glu Leu His Met Tyr Gly Phe Gly Lys Glu Glu
 355 360 365
 Gln His Leu Lys Glu Arg Ile Gln Glu Leu Gly Leu Glu Lys His Val
 370 375 380
 Ile Leu Arg Gly Phe Leu Lys Asp Leu Thr Asp Glu Tyr Gln Asp Ala
 385 390 395 400
 Tyr Leu Asn Leu Ile Thr Ser Asn Met Glu Gly Phe Ser Leu Ala Leu
 405 410 415
 Leu Glu Cys Glu Ser His Gly Val Pro Ser Ile Ser Tyr Asp Ile Gln
 420 425 430
 Tyr Gly Pro Gly Glu Leu Ile Gln Asp Gly Lys Asn Gly Tyr Leu Ile
 435 440 445
 Glu Lys Asn Asn Gln His Met Leu Phe Glu Lys Val Lys Leu Leu Leu
 450 455 460
 Asn Asn Pro Gln Leu Gln Gln Ser Phe Ser His His Cys Ile Glu Thr
 465 470 475 480
 Ala Gln Lys Tyr Ser Gln Thr Gln Ile Met Leu Leu Trp Lys Asn Leu
 485 490 495
 Leu Gln His Phe Asn
 500

<210> 5263
 <211> 72
 <212> PRT
 <213> S.epidermidis

<400> 5263
 Val Met Leu Tyr Ser Leu Tyr Ile Arg His Pro Val Asn Leu Val Tyr
 1 5 10 15
 Trp Tyr Leu Leu Asn Tyr Thr Lys Arg Pro Tyr Phe Leu Lys Tyr Phe
 20 25 30
 Asn Ile Lys Leu His Ile Ser Thr Lys Tyr Phe Gly Glu Thr Leu Glu
 35 40 45
 Gly Thr Gly Gln Ala Glu Asp Tyr Arg Leu Lys Leu Ser Pro Lys Lys
 50 55 60
 Ala Ser Gln Gln Tyr Glu Ala Leu
 65 70

<210> 5264
 <211> 331
 <212> PRT
 <213> S.epidermidis

<400> 5264
 Ile Ile Leu Tyr Asn Thr Leu Asn Ala Trp Gly Gly Phe Ile Ile Met
 1 5 10 15
 Lys Tyr Ile Asp Glu Gln Thr Gln Ala Gln Leu Leu Asp Met Asn Glu
 20 25 30
 Val Ile Leu Glu Val Glu Lys Ala Leu Gln Ala Phe Ser Glu Asn Lys
 35 40 45
 Thr Ile Thr Pro Leu Arg Tyr Val Leu Pro Phe Asn Glu Gln Asn Arg
 50 55 60
 Tyr Leu Val Met Pro Ala Leu Ser Asp Glu Leu Asn Ile Val Gly Leu
 65 70 75 80
 Lys Thr Val Ser Phe Ala Pro Glu Asn Ser Lys Lys Gly Lys Ala Thr
 85 90 95
 Ile Thr Gly Ser Val Ile Leu Ser Asp Tyr Glu Thr Gly Glu Thr Leu
 100 105 110
 Ser Ile Leu Asp Gly Gly Phe Leu Thr Lys Val Arg Thr Gly Ala Ile
 115 120 125
 Ser Gly Val Ala Thr Lys Tyr Leu Ala Lys Glu Asn Ala Lys Thr Leu
 130 135 140
 Ser Val Ile Gly Ala Gly Val Gln Ala Glu Gly Leu Ile Glu Ala Ile
 145 150 155 160
 Leu Ala Val Arg Asp Ile Glu Lys Ile His Ile Ala Ser Arg Thr Phe
 165 170 175
 Glu Lys Ala Glu Lys Phe Ala Gln Asn Ile Arg Asn Arg Phe Asn Ile
 180 185 190
 Lys Val Ser Val Phe Arg Ser Ala Asp Glu Ala Ile Asp Ser Ala Asp
 195 200 205
 Ile Val Val Thr Ala Thr Asn Ala Asn Gln Pro Val Tyr Thr His Ser
 210 215 220
 Leu His Pro Gly Val His Leu Asn Ala Val Gly Ser Phe Lys Pro Asp
 225 230 235 240
 Met Gln Glu Ile Pro Ser Glu Thr Met Leu Val Ala Asn Lys Ile Val
 245 250 255

Val Glu Ser Met Glu Ala Ala Leu Glu Glu Thr Gly Asp Leu Lys Ile
 260 265 270
 Pro Gln Ala Glu Gly Ile Leu Thr Lys Asn Met Leu His Ser Glu Leu
 275 280 285
 Gly Asp Ile Ile Ser Gly Glu Lys Val Gly Arg Glu Thr Glu Glu Glu
 290 295 300
 Val Thr Val Phe Lys Ser Val Gly Leu Ala Ile Val Asp Ile Ile Val
 305 310 315 320
 Ala Gln Tyr Phe Tyr Lys Lys Leu Ile Gln Ser
 325 330

<210> 5265

<211> 127

<212> PRT

<213> S.epidermidis

<400> 5265

Trp Arg Lys Tyr Lys Met Ala Asn Gln Glu Gln Ile Ile Glu Ala Ile
 1 5 10 15
 Lys Glu Met Ser Val Leu Glu Leu Asn Asp Leu Val Lys Ala Ile Glu
 20 25 30
 Glu Glu Phe Gly Val Thr Ala Ala Ala Pro Val Ala Ala Ala Gly Ala
 35 40 45
 Ala Gly Gly Gly Asn Ala Ala Ala Glu Lys Thr Glu Phe Asp Val Glu
 50 55 60
 Leu Thr Ser Ala Gly Ser Ser Lys Ile Lys Val Val Lys Ala Val Lys
 65 70 75 80
 Glu Ala Thr Gly Leu Gly Leu Lys Asp Ala Lys Glu Leu Val Asp Gly
 85 90 95
 Ala Pro Lys Val Ile Lys Glu Ala Met Pro Lys Glu Asp Ala Glu Lys
 100 105 110
 Leu Lys Glu Gln Leu Glu Glu Val Gly Ala Ser Val Glu Leu Lys
 115 120 125

<210> 5266

<211> 135

<212> PRT

<213> S.epidermidis

<400> 5266

Tyr Leu Val Tyr Ser Lys Ala Ser Ile Leu Asn Met Ile Asp Gly Tyr
 1 5 10 15
 Lys Met Asn Cys Asn Ile Leu Glu Asp Val Val Pro Glu Cys Asp Ser
 20 25 30
 Asn Ser Ile Ala Gln Tyr Gly Ile Gln Ala Thr Leu Pro Lys Pro Gln
 35 40 45
 Gly Glu Asn Gly Ser Lys Val Glu Asp Val Val Ile Arg Leu Glu Arg
 50 55 60
 Thr Asn Lys Arg Tyr Ala Gln Met Leu Lys Glu Val Glu Phe Ile Asn
 65 70 75 80
 Gln Ser Gln Gln Lys Leu Gly His Val Asp Phe Cys Phe Leu Glu His
 85 90 95
 Leu Lys Lys Gly Arg Arg Arg Asp Lys Ile Ile Glu Lys Met Pro Asn
 100 105 110
 Ala Lys Leu Asn Arg Asn Asn Phe Leu Ala Arg Lys Asp Glu Leu Ala
 115 120 125

Glu Lys Ile Tyr Leu Leu Gln
130 135

<210> 5267

<211> 823

<212> PRT

<213> S.epidermidis

<400> 5267

Asn	Arg	Arg	Tyr	Leu	Tyr	Met	Leu	Phe	Gly	Arg	Leu	Thr	Glu	Arg	Ala
1			5						10					15	
Gln	Arg	Val	Leu	Ala	His	Ala	Gln	Glu	Ala	Ile	Arg	Leu	Asn	His	
		20					25					30			
Ser	Asn	Ile	Gly	Thr	Glu	His	Leu	Leu	Gly	Leu	Met	Lys	Glu	Pro	
	35					40				45					
Glu	Gly	Ile	Ala	Ala	Lys	Val	Leu	Glu	Ser	Phe	Asn	Ile	Thr	Glu	Asp
	50				55					60					
Lys	Val	Ile	Glu	Glu	Val	Glu	Lys	Leu	Ile	Gly	His	Gly	Gln	Glu	Gln
65				70					75					80	
Met	Gly	Thr	Leu	His	Tyr	Thr	Pro	Arg	Ala	Lys	Lys	Val	Ile	Glu	Leu
			85					90					95		
Ser	Met	Asp	Glu	Ala	Arg	Lys	Leu	His	His	Asn	Phe	Val	Gly	Thr	Glu
		100					105					110			
His	Ile	Leu	Leu	Gly	Leu	Ile	Arg	Glu	Asn	Glu	Gly	Val	Ala	Ala	Arg
	115					120					125				
Val	Phe	Ala	Asn	Leu	Asp	Leu	Asn	Ile	Thr	Lys	Ala	Arg	Ala	Gln	Val
	130				135					140					
Val	Lys	Ala	Leu	Gly	Ser	Pro	Glu	Met	Ser	Asn	Lys	Asn	Ala	Gln	Ala
145				150					155					160	
Asn	Lys	Ser	Asn	Asn	Thr	Pro	Thr	Leu	Asp	Gly	Leu	Ala	Arg	Asp	Leu
			165					170					175		
Thr	Val	Ile	Ala	Lys	Asp	Gly	Thr	Leu	Asp	Pro	Val	Val	Gly	Arg	Asp
		180				185						190			
Lys	Glu	Ile	Thr	Arg	Val	Ile	Glu	Val	Leu	Ser	Arg	Arg	Thr	Lys	Asn
	195					200					205				
Asn	Pro	Val	Leu	Ile	Gly	Glu	Pro	Gly	Val	Gly	Lys	Thr	Ala	Ile	Ala
	210				215					220					
Glu	Gly	Leu	Ala	Gln	Ala	Ile	Val	Lys	Asn	Glu	Val	Pro	Glu	Thr	Leu
225				230					235					240	
Lys	Asp	Lys	Arg	Val	Met	Ser	Leu	Asp	Met	Gly	Thr	Val	Val	Ala	Gly
		245				250							255		
Thr	Lys	Tyr	Arg	Gly	Glu	Phe	Glu	Glu	Arg	Leu	Lys	Lys	Val	Met	Glu
		260				265						270			
Glu	Ile	His	Gln	Ala	Gly	Asn	Val	Ile	Leu	Phe	Ile	Asp	Glu	Leu	His
	275					280					285				
Thr	Leu	Val	Gly	Ala	Gly	Gly	Ala	Glu	Gly	Ala	Ile	Asp	Ala	Ser	Asn
	290				295					300					
Ile	Leu	Lys	Pro	Ala	Leu	Ala	Arg	Gly	Glu	Leu	Gln	Cys	Ile	Gly	Ala
305				310					315					320	
Thr	Thr	Leu	Asp	Glu	Tyr	Arg	Lys	Asn	Ile	Glu	Lys	Asp	Ala	Ala	Leu
			325					330					335		
Glu	Arg	Arg	Phe	Gln	Pro	Ile	Gln	Val	Asp	Glu	Pro	Thr	Val	Glu	Asp
		340				345						350			
Thr	Ile	Glu	Ile	Leu	Lys	Gly	Leu	Arg	Asp	Arg	Tyr	Glu	Ala	His	His
	355					360					365				
Arg	Ile	Asn	Ile	Ser	Asp	Glu	Ala	Leu	Glu	Ala	Ala	Ala	Lys	Leu	Ser

```

      370                      375                      380
Asp Arg Tyr Val Ser Asp Arg Phe Leu Pro Asp Lys Ala Ile Asp Leu
385                      390                      395                      400
Ile Asp Glu Ala Ser Ser Lys Val Arg Leu Lys Ser His Thr Thr Pro
      405                      410                      415
Ser Asn Leu Lys Glu Ile Glu Gln Glu Ile Asp Lys Val Lys Asn Glu
      420                      425                      430
Lys Asp Ala Ala Val His Ala Gln Glu Phe Glu Asn Ala Ala Asn Leu
      435                      440                      445
Arg Asp Lys Gln Ser Lys Leu Glu Lys Gln Tyr Glu Asp Ala Lys Asn
450                      455                      460
Glu Trp Lys Asn Ala Gln Gly Gly Leu Asp Thr Ala Leu Ser Glu Glu
465                      470                      475                      480
Asn Ile Ala Glu Val Ile Ala Gly Trp Thr Gly Ile Pro Leu Thr Lys
      485                      490                      495
Ile Asn Glu Thr Glu Ser Asp Arg Leu Leu Asn Leu Glu Asp Thr Leu
      500                      505                      510
His Lys Arg Val Ile Gly Gln Asn Asp Ala Val Asn Ser Ile Ser Lys
      515                      520                      525
Ala Val Arg Arg Ala Arg Ala Gly Leu Lys Asp Pro Lys Arg Pro Ile
530                      535                      540
Gly Ser Phe Ile Phe Leu Gly Pro Thr Gly Val Gly Lys Thr Glu Leu
545                      550                      555                      560
Ala Arg Ala Leu Ala Glu Ser Met Phe Gly Glu Asp Asp Ala Met Ile
      565                      570                      575
Arg Val Asp Met Ser Glu Phe Met Glu Lys His Ala Val Ser Arg Leu
      580                      585                      590
Val Gly Ala Pro Pro Gly Tyr Val Gly His Asp Asp Gly Gly Gln Leu
      595                      600                      605
Thr Glu Lys Val Arg Arg Lys Pro Tyr Ser Val Ile Leu Phe Asp Glu
610                      615                      620
Ile Glu Lys Ala His Pro Asp Val Phe Asn Ile Leu Leu Gln Val Leu
625                      630                      635                      640
Asp Asp Gly His Leu Thr Asp Thr Lys Gly Arg Thr Val Asp Phe Arg
      645                      650                      655
Asn Thr Val Ile Ile Met Thr Ser Asn Val Gly Ala Gln Glu Leu Gln
      660                      665                      670
Asp Gln Arg Phe Ala Gly Phe Gly Gly Ala Ser Glu Gly Ser Asp Tyr
      675                      680                      685
Glu Thr Val Arg Lys Thr Met Met Lys Glu Leu Lys Asn Ser Phe Arg
690                      695                      700
Pro Glu Phe Leu Asn Arg Val Asp Asp Ile Ile Val Phe His Lys Leu
705                      710                      715                      720
Thr Lys Asp Glu Leu Lys Glu Ile Val Thr Met Met Val Asn Lys Leu
      725                      730                      735
Thr His Arg Leu Ser Glu Gln Asn Ile Asn Ile Val Val Thr Asp Lys
      740                      745                      750
Ala Lys Glu Lys Ile Ala Glu Glu Gly Tyr Asp Pro Glu Tyr Gly Ala
      755                      760                      765
Arg Pro Leu Ile Arg Ala Ile Gln Lys Thr Val Glu Asp Asn Leu Ser
770                      775                      780
Glu Leu Ile Leu Asp Gly Asn Lys Ile Glu Gly Lys Glu Val Thr Ile
785                      790                      795                      800
Asp His Asp Gly Lys Glu Phe Lys Tyr Asp Ile His Glu Ile Thr Ala
      805                      810                      815
Lys Lys Glu Thr Thr Glu Ser

```


820

<210> 5268
 <211> 58
 <212> PRT
 <213> S.epidermidis

<400> 5268
 Met Lys Tyr Leu Leu Ser Tyr Met Ser Met Phe Ile Ala Met Ile Ile
 1 5 10 15
 Thr Leu Ile Leu Gly Gly Gly Phe Phe Thr Val Ile Ala Phe Ser Met
 20 25 30
 Leu Thr Leu Ile Phe Ser Thr Phe Phe Trp Glu Lys Trp Ile Glu Ile
 35 40 45
 Thr Lys Lys Thr Glu Thr Cys Ala Asn Lys
 50 55

<210> 5269
 <211> 171
 <212> PRT
 <213> S.epidermidis

<400> 5269
 Trp Phe Phe Gln Thr Lys Ile Thr Ser Ile Leu Asp Ala Asn Glu His
 1 5 10 15
 Ser Thr Val Tyr Gly Lys Arg Gly Arg Glu Arg Val Tyr Glu Glu Arg
 20 25 30
 Tyr Arg Val His Glu Glu Gln Leu Gln Arg Asn His Gly Arg Ala Thr
 35 40 45
 Leu Leu Asp Tyr Ser Glu Ile Arg Gln Ile Thr Ser Gln Tyr Ile Gly
 50 55 60
 Tyr Leu Pro Tyr Asp Glu Leu Met Ser Leu Thr Pro Asn Glu Trp Lys
 65 70 75 80
 Asp Trp Val Ile Gly Arg Arg Leu Ala Leu Leu Asp Glu Gln Glu Thr
 85 90 95
 Leu Leu Phe Gly Ala Gln Ala Asn Gly Leu Val Gln Ala Gly Lys Ser
 100 105 110
 Leu Lys Arg Leu Gln Lys Gln Leu Glu Arg Ala Arg Tyr Glu Val Arg
 115 120 125
 Gly Gln Ser Asp Glu Tyr Glu Arg Met Lys Lys Arg Lys Leu Ala Gln
 130 135 140
 Asn Lys Arg Asn Arg Glu Ala Gln Lys Gln Gly Thr Arg Arg Phe Met
 145 150 155 160
 Asn Ser Leu Arg Asn Thr Ser Gln Arg Gly Gly
 165 170

<210> 5270
 <211> 154
 <212> PRT
 <213> S.epidermidis

<400> 5270
 Glu Cys Thr His Met Phe Trp Ile Phe Asn Phe Ile Phe Ser Phe Leu
 1 5 10 15
 Ala Ser Leu Phe Phe Cys Val Ile Phe Asp Ala Pro Arg Lys Leu Tyr
 20 25 30

Phe Ala Cys Gly Phe Val Gly Ala Cys Gly Trp Met Val Tyr Thr Val
 35 40 45
 Leu Phe Asn Gly Phe Glu Leu His Thr Ile Tyr Ser Ser Phe Phe Gly
 50 55 60
 Ser Leu Ala Leu Gly Leu Leu Ser His Tyr Met Ala Arg Arg Lys Lys
 65 70 75 80
 Glu Pro Val Ile Ile Phe Met Val Thr Gly Ile Ile Pro Leu Val Pro
 85 90 95
 Gly Gly Leu Ala Tyr Asp Ala Thr Lys Asn Leu Val Leu Leu His Phe
 100 105 110
 Gly Lys Ala Ile Asn Thr Met Leu Glu Val Thr Leu Ile Ala Gly Ala
 115 120 125
 Ile Ala Leu Gly Leu Leu Phe Ala Asp Gln Ile Ser Lys Ile Val Ile
 130 135 140
 Ser Gly Phe Ala Arg Thr Arg Lys Arg Leu
 145 150

<210> 5271

<211> 41

<212> PRT

<213> S.epidermidis

<400> 5271

Ile Ser Thr His Lys Thr Asp Val Phe Tyr Val Leu Leu Lys Glu Lys
 1 5 10 15
 Gly Arg Arg Arg Ala Asn Arg Leu Thr His Leu Arg Leu Thr Gln Phe
 20 25 30
 Lys Asn Phe Ile Phe Arg Ile Ala Leu
 35 40

<210> 5272

<211> 162

<212> PRT

<213> S.epidermidis

<400> 5272

Gly Arg Ser His Met Tyr Ser Val Arg Gln Ala Thr Glu Lys Asp Val
 1 5 10 15
 Val Ala Ile Arg Asp Val Ala Thr Lys Ala Trp Tyr Asn Thr Tyr Leu
 20 25 30
 Asn Ile Tyr Ala Ala Ser Thr Val Asn Glu Leu Leu Ala Ala Ser Tyr
 35 40 45
 Asn Glu Thr His Leu Lys Lys Arg Leu Asn Glu Gln Leu Phe Leu Val
 50 55 60
 Ala Glu Glu Asp Ser Glu Ile Val Gly Phe Ala Asn Phe Ile Tyr Gly
 65 70 75 80
 Glu Glu Leu Tyr Leu Ser Ala His Tyr Val Arg Pro Glu Ser Gln His
 85 90 95
 Arg Gly Tyr Gly Thr Arg Leu Leu Glu Ala Gly Leu Lys Arg Phe Lys
 100 105 110
 Asp Gln Tyr Glu Thr Val Tyr Leu Glu Val Asp Asn Asn Ser Asn
 115 120 125
 Gly Ile Glu Tyr Tyr Gln Asn His Gly Phe Glu Ile Ile Arg Ser Tyr
 130 135 140
 Gln Pro Glu Met Tyr Gly Glu Ile Met Asp Leu Ala Leu Met Lys Lys
 145 150 155 160

Ser Phe

<210> 5273
 <211> 49
 <212> PRT
 <213> S.epidermidis

<400> 5273
 Val Lys Tyr His Val Phe Thr Ser Val Arg Ser Leu Leu Arg Thr Val
 1 5 10 15
 Tyr Asn Leu Thr Phe Phe Val Pro Val Ser Gln His Phe Ser Leu Gln
 20 25 30
 Lys Ile Gln Lys Asp Phe Phe Tyr Leu Tyr Ile Val Phe Ile Trp Glu
 35 40 45
 Arg

<210> 5274
 <211> 130
 <212> PRT
 <213> S.epidermidis

<400> 5274
 Tyr Val Asn Gln Gly Lys Ser Lys Thr Lys Gln Ser Asp Ser Pro Ala
 1 5 10 15
 Leu Asn Arg Gly Phe Asn Ser Lys Lys Lys Gln Phe Thr Asn Leu Asn
 20 25 30
 Ser Pro Gln Lys Arg Gly Val Cys Thr Arg Val Gly Thr Met Thr Pro
 35 40 45
 Lys Lys Pro Asn Ser Ala Leu Arg Lys Tyr Ala Arg Val Arg Leu Ser
 50 55 60
 Asn Asn Ile Glu Val Asn Ala Tyr Ile Pro Gly Ile Gly His Asn Leu
 65 70 75 80
 Gln Glu His Ser Val Val Leu Val Arg Gly Gly Arg Val Lys Asp Leu
 85 90 95
 Pro Gly Val Arg Tyr His Ile Val Arg Gly Ala Leu Asp Thr Ser Gly
 100 105 110
 Val Asp Gly Arg Arg Gln Gly Arg Ser Leu Tyr Gly Thr Lys Lys Pro
 115 120 125
 Lys Asn
 130

<210> 5275
 <211> 57
 <212> PRT
 <213> S.epidermidis

<400> 5275
 His Glu Arg Leu Pro Leu Ser Leu Ile Lys Leu Ile Ser Thr Arg Leu
 1 5 10 15
 Asn His Tyr Ala Glu Tyr His Arg Tyr His Lys Phe Lys Asn Met Lys
 20 25 30
 Arg Ala Pro Leu Thr Phe Val Ala Arg Gly Ala Leu Ala Arg Phe His
 35 40 45
 Ser Ser Phe Asn Ser Asn Thr His Ile

50

55

<210> 5276
 <211> 312
 <212> PRT
 <213> S.epidermidis

<400> 5276

Leu Ile Leu His Asp Val Glu Val Tyr Lys Asn Lys Glu Arg Leu Arg
 1 5 10 15
 Ile Ser Asn Asn Arg Phe Thr Gly Thr Ala Leu Arg Val Val Ser Tyr
 20 25 30
 Asp Val Lys Gly Ala Gly Tyr Asp Arg Lys Phe Asp Glu Ile Asp Arg
 35 40 45
 Val Asn Gly Arg Phe His Asn Ala Thr Lys Glu Glu Lys Lys Ser Ile
 50 55 60
 Ser Met Thr Val Arg Tyr Asp Val Glu Lys Ile Ala Tyr Ala Ser His
 65 70 75 80
 Leu Lys Ala Asn Ile Gln Ala Met Leu Arg Gly His Phe Tyr Leu Arg
 85 90 95
 Glu Leu Ala Thr Ser Glu Ser Glu Val Lys Phe Glu Asn Ile Phe Glu
 100 105 110
 Pro Lys Glu Gln Ser Phe Glu Leu Glu Tyr Val Asp Gly Arg Gln Ile
 115 120 125
 Leu Val Gly Leu Val Asn Glu Val Ser Phe Asp Thr Thr Lys Thr Ser
 130 135 140
 Gly Glu Phe Thr Leu Asp Phe Glu Thr Ile Glu Leu Pro Tyr Phe Glu
 145 150 155 160
 Ser Ile Gly Tyr Ser Thr Asp Leu Glu Lys Glu Ser Gly Asn Leu Asn
 165 170 175
 Lys Trp Gly Ile Pro Asp Lys Asn Pro Phe Asn Thr Ser His Lys Glu
 180 185 190
 Arg Arg Tyr Thr Phe Tyr Asp Thr Lys Val Gly Asp Val Tyr Tyr Gly
 195 200 205
 Gly Thr Ala Glu Ile Asn Gln Phe Asn Gln Asp Ser Val Val Glu Met
 210 215 220
 Thr Leu Gly Glu Asn Val Ser Lys Asn Asp Ser Asp Gly Phe Asn Phe
 225 230 235 240
 Tyr Met Thr His Ser Asp Ile Met Lys Ile Ser Gly Leu Glu Leu Arg
 245 250 255
 Ala Gly Asp Val Ile Lys Phe Asp Gly Ile His Val Tyr Arg Asn Asn
 260 265 270
 Leu Arg Ile Asp Asp Tyr Asn Lys Thr Lys Gln Gln Pro Val Leu Met
 275 280 285
 Pro Gly Trp Asn Thr Phe His Thr Thr Lys Lys Leu Gln Lys Ile Thr
 290 295 300
 Phe Lys His Lys Arg Tyr Tyr Leu
 305 310

<210> 5277
 <211> 277
 <212> PRT
 <213> S.epidermidis

<400> 5277

His Met Ala Gln Gly Thr Thr Thr Lys Ser Thr Gln Ile Val Pro Glu

```

1           5           10           15
Val Leu Lys Pro Met Met Gln Ala Glu Leu Asp Lys Lys Leu Arg Phe
20           25           30
Ala Gln Phe Ala Asp Ile Asp Ser Thr Leu Val Gly Gln Pro Gly Asp
35           40           45
Thr Leu Thr Phe Pro Ala Phe Val Tyr Ser Gly Asp Ala Thr Val Val
50           55           60
Pro Glu Gly Gln Lys Ile Pro Val Asp Lys Ile Glu Thr Asn Arg Arg
65           70           75
Glu Ala Lys Ile His Lys Ile Gly Lys Gly Thr Asp Ile Thr Asp Glu
85           90           95
Ala Leu Leu Ser Gly Tyr Gly Asp Pro Gln Gly Glu Ala Val Arg Gln
100          105          110
His Gly Leu Ala Ile Ala Asn Lys Val Asp Asn Asp Val Leu Glu Ala
115          120          125
Leu Arg Gly Thr Lys Leu Thr Val Ser Ala Asp Ile Gly Thr Leu Ala
130          135          140
Gly Leu Glu Ala Ala Ile Asp Thr Phe Asp Asp Glu Asp Leu Glu Pro
145          150          155
Met Val Leu Phe Ile Asn Pro Lys Asp Ala Gly Lys Leu Arg Ser Ser
165          170          175
Ala Ser Ala Asn Phe Thr Arg Ala Thr Glu Leu Gly Asp Asn Ile Ile
180          185          190
Val Lys Gly Ala Phe Gly Glu Ala Leu Gly Ala Val Ile Val Arg Ser
195          200          205
Lys Lys Leu Asp Glu Gly Glu Ala Ile Leu Ala Lys Arg Gly Ala Val
210          215          220
Lys Leu Ile Thr Lys Arg Asp Phe Phe Leu Glu Thr Asp Arg Asp Pro
225          230          235
Ser Thr Lys Thr Thr Ala Leu Tyr Ser Asp Lys His Tyr Val Ala Tyr
245          250          255
Leu Tyr Asp Glu Ser Lys Ala Val Lys Val Thr Lys Gly Ala Gly Thr
260          265          270
Thr Asp Ser Gly Ala
275

```

<210> 5278

<211> 42

<212> PRT

<213> S.epidermidis

<400> 5278

```

Tyr Lys Arg Gln Lys Glu Asn Gly Asn Thr Tyr Asp Asp Thr Ile Phe
1           5           10           15
Asp Phe Tyr Leu His Leu Ile Asn Leu Ser Ile Leu Arg Lys Ser Thr
20           25           30
His Leu Leu Asn Ile Asn Phe Tyr Ile Leu
35           40

```

<210> 5279

<211> 45

<212> PRT

<213> S.epidermidis

<400> 5279

```

Gln Glu Arg Gln Lys Lys Leu Tyr Tyr Lys Leu Ile Lys His Lys Lys

```

```
<210> 5280
<211> 406
<212> PRT
<213> S.epidermidis
```

<400>	5280														
Arg	Asn	Met	His	Ile	Val	Ile	Gly	Ile	Leu	Gly	Ile	Ile	Phe	Phe	Leu
1				5					10					15	
Ala	Leu	Ala	Val	Leu	Phe	Ser	Ser	Asp	Arg	Lys	Asn	Ile	Arg	Trp	Arg
			20					25					30		
Tyr	Val	Gly	Leu	Leu	Leu	Val	Ile	Gln	Leu	Ile	Phe	Ala	Phe	Ile	Leu
		35					40					45			
Leu	Lys	Thr	Asn	Leu	Gly	Ile	Ser	Val	Ile	Gly	Ser	Ile	Ser	Asp	Gly
	50					55					60				
Phe	Asn	Tyr	Leu	Leu	Ala	Lys	Ala	Ala	Val	Gly	Val	Asn	Phe	Val	Phe
65					70					75					80
Gly	Gly	Phe	Lys	Phe	Ile	Asp	Pro	Lys	Gln	Pro	Pro	Phe	Phe	Phe	Ser
				85					90					95	
Val	Leu	Leu	Pro	Ile	Val	Phe	Ile	Ser	Ala	Leu	Ile	Gly	Ile	Leu	Gln
			100					105					110		
Tyr	Thr	Arg	Ile	Leu	Pro	Leu	Ile	Ile	Asn	Leu	Leu	Gly	Phe	Leu	Ile
		115					120					125			
Ser	Lys	Ile	Asn	Gly	Met	Gly	Arg	Leu	Glu	Ser	Tyr	Asn	Ala	Val	Ala
	130					135					140				
Ala	Ala	Ile	Leu	Gly	Gln	Ser	Glu	Val	Phe	Ile	Ser	Leu	Lys	Lys	Gln
145					150					155					160
Leu	Pro	Tyr	Ile	Pro	Lys	Gln	Arg	Leu	Tyr	Thr	Leu	Thr	Ala	Ser	Ala
				165					170					175	
Met	Ser	Thr	Val	Ser	Ala	Ser	Ile	Ile	Gly	Ala	Tyr	Phe	Thr	Leu	Ile
			180					185					190		
Glu	Pro	Lys	Tyr	Val	Val	Thr	Ala	Val	Val	Leu	Asn	Leu	Phe	Gly	Gly
		195					200					205			
Phe	Ile	Ile	Ala	Ser	Ile	Ile	Asn	Pro	Tyr	Lys	Val	Asn	Glu	Glu	Asp
	210					215					220				
Asp	Lys	Leu	Leu	Ile	Asp	Glu	Asn	Glu	Thr	Lys	Lys	Gln	Ser	Phe	Phe
225					230					235					240
Glu	Met	Leu	Gly	Glu	Tyr	Ile	Leu	Asp	Gly	Phe	Lys	Val	Ala	Val	Ile
				245					250					255	
Val	Gly	Ala	Met	Leu	Ile	Gly	Tyr	Ile	Ala	Ile	Ile	Ala	Leu	Leu	Asn
			260					265					270		
Gly	Met	Val	Ser	Gly	Ile	Leu	Ser	Phe	Met	Ser	Gly	Gly	Ala	Ile	Gln
		275					280					285			
Trp	Asn	Phe	Gln	Thr	Leu	Ile	Gly	Phe	Ile	Phe	Ala	Pro	Phe	Ala	Phe
	290					295					300				
Leu	Thr	Gly	Ile	Pro	Trp	Gln	Asp	Ala	Val	Gln	Ser	Gly	Ser	Val	Met
305					310					315					320
Ala	Thr	Lys	Leu	Leu	Ser	Asn	Glu	Phe	Val	Ala	Met	Gln	Asp	Leu	Gly
				325					330</						

Trp	His	Phe	Lys	Thr	Thr	Gly	Asn	Ala	Ile	Ala	Met	Ala	Trp	Tyr	Arg		
			20					25					30				
Tyr	Pro	Lys	Gly	Phe	Lys	Phe	Tyr	Arg	Asn	Thr	Arg	Asn	Phe	Val	Pro		
		35					40					45					
Lys	Pro	Gly	Asp	Met	Ala	Val	Trp	Gly	Lys	Gly	Ser	Phe	Asn	Asn	Gly		
		50				55					60						
Val	Gly	His	Thr	Ala	Val	Val	Ile	Gly	Pro	Ser	Thr	Lys	Ser	Tyr	Phe		
65					70					75					80		
Thr	Ser	Val	Asp	Gln	Asn	Trp	Ile	Gly	Ala	Asn	Ser	Tyr	Thr	Gly	Ser		
				85					90					95			
Pro	Gly	Ala	Lys	Ile	Lys	His	Ser	Tyr	Asn	Gly	Ile	Ser	Gly	Phe	Val		
			100					105						110			
Arg	Pro	Pro	Tyr	His	Ala	Glu	Thr	Lys	Lys	Pro	Ser	Lys	Pro	Ser	Ser		
			115					120					125				
Thr	Pro	Ser	Lys	Pro	Ser	Asn	Asp	Asn	Thr	Pro	Lys	Asn	Thr	Lys	Glu		
						135					140						
Gln	Thr	Lys	Pro	Ile	Thr	Lys	Glu	Ile	Thr	Lys	Val	Ser	Tyr	Thr	Ser		
145					150					155					160		
Phe	Ala	Tyr	Asp	Leu	Asp	Asp	Asp	Leu	Glu	Tyr	Ile	Tyr	His	Tyr	Met		
				165					170					175			
Val	Glu	Gly	Gln	Lys	Leu	Ile	Gly	Lys	Val	Lys	Gly	Ile	Tyr	Ile	Lys		
			180					185					190				
Glu	Ser	Thr	His	Met	Arg	Ser	Val	Glu	Glu	Leu	Tyr	Leu	Gln	Arg	Asn		
			195					200					205				
Lys	Tyr	Val	Asn	Glu	Asp	Glu	Tyr	Pro	His	Val	Tyr	Ile	Asp	Arg	Glu		
		210				215					220						
Arg	Val	Trp	Thr	Pro	Arg	Pro	Asp	Ser	Glu	Glu	Ala	Pro	Glu	His	Pro		
225					230					235					240		
Gly	Trp	Leu	Val	Met	Glu	Val	Cys	Gly	Gly	Gln	Thr	Asp	Ser	Lys	Arg		
				245					250					255			
Gln	Phe	Met	Leu	Asn	Gln	Ile	Arg	Ala	Leu	Ile	Tyr	Gly	Val	Trp	Leu		
			260					265					270				
Leu	Ser	Trp	Ser	Lys	Val	Lys	Leu	Ser	Glu	Ser	Ser	Ile	Lys	Ala	Asp		
		275					280					285					
Pro	Asn	Ile	Trp	Arg	Ser	Met	Lys	Asp	Leu	Ile	Asn	Tyr	Asp	Leu	Ile		
		290				295					300						
Lys	Asn	Gly	Ile	Pro	Asp	Glu	Ser	Lys	Tyr	Lys	Glu	Val	Glu	Lys	Lys		
					310					315					320		
Ile	Ile	Gly	Leu	Tyr	Leu	Lys	Arg	Asp	Lys	Leu	Leu	Thr	Glu	Thr	Ile		
				325					330					335			
Thr	Thr	Thr	Thr	Thr	Lys	Thr	Lys	Ile	Lys	Ile	Lys	Pro	Lys	Thr	Ser		
				340				345					350				
Val	Asp	Asn	Pro	Ser	Gln	Asn	Asp	Lys	Ser	Thr	Gly	Lys	Thr	Thr	Asn		
		355					360					365					
Arg	Thr	Ser	Asn	Lys	Pro	Arg	Val	Val	Val	Glu	Lys	Ser	Lys	Tyr	Thr		
		370				375					380						
Phe	Gln	Gln	Ala	Leu	Asn	Ala	Gln	Met	Ala	His	Gly	Met	Pro	Gln	Lys		
385					390					395					400		
Ser	Tyr	Ser	Trp	Gly	Trp	Gly	Asn	Ala	Ser	Arg	Ser	Gln	Thr	Ser	Lys		
				405					410					415			
Tyr	Met	Asn	Pro	Asn	Thr	Ile	Trp	Asn	Ser	Ser	Thr	Gln	Arg	Tyr	Gln		
			420					425					430				
Met	Leu	Asp	Leu	Gly	Lys	Tyr	Gln	Gly	Ile	Ser	Val	Ser	Lys	Leu	Asn		
		435					440				445						
Lys	Ile	Leu	Lys	Gly	Lys	Gly	Thr	Leu	Ser	Gly	Gln	Gly	Lys	Ala	Phe		
	450					455					460						

Ala Asp Gly Cys Lys Lys Tyr Asn Val Asn Glu Ile Tyr Leu Ile Ala
 465 470 475 480
 His Ala Phe Leu Glu Ser Gly Tyr Gly Arg Ser Asn Phe Ala Ser Gly
 485 490 495
 Arg Tyr Gly Ile Tyr Asn Tyr Phe Gly Ile Ala Ala Tyr Asp Asn Asn
 500 505 510
 Pro Asn Ala Ser Ile Gly Tyr Ala Arg Arg Gln Gly Trp Thr Ser Pro
 515 520 525
 Arg Asn Gly Ile Ile Gly Gly Ala Lys Phe Val Arg Lys Gln Tyr Phe
 530 535 540
 Asn Lys Gly Lys Asn Thr Leu Tyr Arg Met Arg Trp Asn Pro Ser Asn
 545 550 555 560
 Pro Gly Arg Met Gln Tyr Ala Thr Ala Ile Glu Trp Cys Asn Phe Gln
 565 570 575
 Ala Ser Thr Ile Ser Lys Leu Tyr Lys Thr Val Gly Thr Lys Gly Met
 580 585 590
 Tyr Tyr Ile Arg Asp Lys Tyr Arg
 595 600

<210> 5283
 <211> 180
 <212> PRT
 <213> S.epidermidis

<400> 5283
 Arg Met Ala Gln Asn Lys Tyr Ile Ala Ala Leu Gln Ile Ala Asp Lys
 1 5 10 15
 Asp Leu Ala Ser Lys Leu Lys Glu Glu Asp Ala Ile Leu Leu Ala Ser
 20 25 30
 Leu Ala Glu Gly Gly His Thr Ile Ser Asn Asp Leu Ala Glu Met Ile
 35 40 45
 Thr Gly Gly Lys Lys Asp Tyr Gly Arg Asn Ser Val Glu Glu Glu Ile
 50 55 60
 Lys Leu Thr Val Asp Arg Val Pro Gly Asp Lys Gly Gln Glu Ala Leu
 65 70 75 80
 Lys Glu Ser Val Lys Asn Phe Lys Gln Leu Arg Leu Trp Ile Trp Glu
 85 90 95
 Val Lys Lys Arg Asp Gly Lys His His Gly Thr Phe Ala Tyr Val Ile
 100 105 110
 Ile Glu Glu Gln Glu Trp Ser Phe Asp Asp Glu Asp Asp Lys Ile Glu
 115 120 125
 Ile Thr Ala Lys Val Lys Phe Asn Ser Ala Asp Gly Ser Val Asp Ser
 130 135 140
 Leu Pro Pro Glu Trp Leu Asn Pro Ser Ala Ala Ala Pro Thr Val Glu
 145 150 155 160
 Phe Glu Gly Met Gly Glu Tyr Thr Gly Thr Tyr Glu Glu Arg Thr Pro
 165 170 175
 Ser Ala Gly Ala
 180

<210> 5284
 <211> 224
 <212> PRT
 <213> S.epidermidis

<400> 5284

Tyr Asn Phe Asn Tyr Glu Val Asn Ile Met Asn Phe Asp Ser Tyr Ile
 1 5 10 15
 Phe Asp Phe Asp Gly Thr Leu Ile Asp Thr Thr Thr Cys His Val Lys
 20 25 30
 Ala Thr Gln Ser Ala Phe Lys Arg Leu Asn Leu Asp Glu Pro Thr Glu
 35 40 45
 Gln Ala Ile Leu His Thr Tyr His Leu Asn Leu Tyr Asn Asn Phe Lys
 50 55 60
 Ala Leu Ala Ser His Glu Leu Ser Phe Tyr Gln Ile Glu Lys Leu Ile
 65 70 75 80
 Asp Glu Tyr Asn His Cys Phe Ser Asn Asp Glu Ile His Gln Ser Lys
 85 90 95
 Glu Tyr Thr Gly Ile Ser Glu Ala Leu Lys Phe Leu His Asn Gln Lys
 100 105 110
 Lys Lys Ile Phe Val Val Ser Asn Lys Glu Ile Leu Thr Thr Gln Lys
 115 120 125
 Tyr Leu Asp Tyr Leu Gly Leu Ser Arg Phe Ile Thr Asp Ser Leu Gly
 130 135 140
 Val Cys Ile Lys Asn Glu Asp Lys Leu Leu Cys Glu Thr Ile Gln Asn
 145 150 155 160
 Leu Ile Gln Lys His His Leu Met Ile Gly Lys Thr Val Tyr Ile Gly
 165 170 175
 Asp Thr Ala Gln Asn Ile Lys Ser Ala Asn Gln Ala His Val Gln Thr
 180 185 190
 Cys Ala Val Thr Trp Gly Ala Gln Ser Ala His Glu Leu Leu His Glu
 195 200 205
 Asn Pro His Tyr Ile Val Asn Asp Pro Glu Glu Phe Leu Thr Ile Leu
 210 215 220

<210> 5285

<211> 136

<212> PRT

<213> S.epidermidis

<400> 5285

Glu Val Ile Asn Val Ile Trp Ile Ser Phe Ser Ser Val Ile Ile Val
 1 5 10 15
 Leu Val Leu Cys Ile Phe Ala Ile Tyr Lys Trp Ile Lys Ala Glu Lys
 20 25 30
 Arg Val Asn Glu Leu Gln Glu Asp Lys His Gly Leu Gln Leu Asp Lys
 35 40 45
 Leu His Leu Glu Arg Glu Val Ser Trp Leu Lys Asn Lys Asp Asn Lys
 50 55 60
 Asn Asn Ile Gly Lys Tyr Val Val Glu Leu Lys Lys Gly Val Tyr Leu
 65 70 75 80
 Val Lys Lys Tyr Ile Gly Ser Tyr Gly Asn Thr Cys Ile Ile Thr Asp
 85 90 95
 Asn Val Phe Glu Ala Leu Ser Tyr Asp Asp Leu Tyr Ser Ala Lys Glu
 100 105 110
 Asp Ala Cys Ser Phe Asn Gly Arg Val Leu Glu His Lys Pro Asn Leu
 115 120 125
 Glu Val Val Lys Gln Cys Gly Ala
 130 135

<210> 5286

<211> 336

<212> PRT

<213> S.epidermidis

<400> 5286

```

Glu Arg Ile Lys Glu Asp Ile Met Ala Asp Leu Leu Ser Val Leu Gln
1      5      10      15
Asp Lys Leu Ser Gly Lys Asn Val Lys Ile Val Leu Pro Glu Gly Glu
      20      25      30
Asp Glu Arg Val Leu Ile Ala Ala Thr Gln Leu Gln Lys Thr Asp Tyr
      35      40      45
Val Ser Pro Ile Val Leu Gly Asn Glu Asp Asn Ile Lys Ser Leu Ala
      50      55      60
Ser Lys His Ala Leu Asp Leu Thr Gln Ile Glu Ile Ile Asp Pro Ala
      65      70      75      80
Thr Ser Glu Leu Lys Asp Glu Leu Val Asp Ala Phe Val Glu Arg Arg
      85      90      95
Lys Gly Lys Ala Thr Lys Glu Gln Ala Val Glu Leu Leu Asp Asn Val
      100      105      110
Asn Tyr Phe Gly Thr Met Leu Val Tyr Thr Gly Lys Ala Glu Gly Leu
      115      120      125
Val Ser Gly Ala Ala His Ser Thr Gly Asp Thr Val Arg Pro Ala Leu
      130      135      140
Gln Ile Ile Lys Thr Lys Pro Gly Val Ser Arg Thr Ser Gly Ile Phe
      145      150      155      160
Phe Met Ile Lys Gly Asp Glu Gln Tyr Ile Phe Gly Asp Cys Ala Ile
      165      170      175
Asn Pro Glu Leu Asp Ala Gln Gly Leu Ala Glu Ile Ala Val Glu Ser
      180      185      190
Ala Lys Ser Ala Gln Ser Phe Gly Met Asp Pro Lys Val Ala Met Leu
      195      200      205
Ser Phe Ser Thr Lys Gly Ser Ala Lys Ser Asp Asp Val Thr Lys Val
      210      215      220
Gln Glu Ala Leu Lys Leu Ala Gln Glu Lys Ala Glu Ala Asp Gln Leu
      225      230      235      240
Asp His Val Val Ile Asp Gly Glu Phe Gln Phe Asp Ala Ala Ile Val
      245      250      255
Pro Ser Val Ala Glu Lys Lys Ala Pro Gly Ala Lys Ile Gln Gly Asp
      260      265      270
Ala Asn Val Phe Val Phe Pro Ser Leu Glu Ala Gly Asn Ile Gly Tyr
      275      280      285
Lys Ile Ala Gln Arg Leu Gly Gly Tyr Asp Ala Val Gly Pro Val Leu
      290      295      300
Gln Gly Leu Asn Ser Pro Val Asn Asp Leu Ser Arg Gly Cys Ser Thr
      305      310      315      320
Glu Asp Val Tyr Asn Leu Ser Ile Ile Thr Ala Ala Gln Ala Leu Gln
      325      330      335

```

<210> 5287

<211> 53

<212> PRT

<213> S.epidermidis

<400> 5287

```

Leu Lys Thr Asn Ser Asn Leu Glu Tyr Phe Ile Glu Ile Gln Phe Asp
1      5      10      15
Asn Ala Ile Ile Tyr Tyr Arg Phe Lys Asn Ile Leu Arg Asn Met Arg

```



```
<210> 5290
<211> 97
<212> PRT
<213> S.epidermidis
```

```
<210> 5291
<211> 467
<212> PRT
<213> S.epidermidis
```

<400> 5291															
Cys 1	Lys	His	Asn	Tyr 5	Ile	Lys	Cys	Leu	Gln 10	Met	Val	Met	Lys	Met	Lys
Lys	Ile	Met	Glu 20	Tyr	Leu	Gln	His 25	Tyr	Ile	Asn	Gln	Tyr	Pro 30	His	Arg
Leu	Ala	Leu	Val	Phe	Glu	Asp	Arg 40	His	Leu	Thr	Tyr	Gly 45	Glu	Leu	Ser
Lys	Glu	Ile	Tyr	Gln	Ala	Ser 55	Met	Arg	Tyr	Lys	Glu 60	Val	Lys	Leu	Asn
Lys 65	Lys	Val	Gly	Leu	Met 70	Asp	Glu	His	Pro	Val 75	Asn	Asn	Ile	Ile	Asn
Tyr	Phe	Ala	Val	His 85	Gln	Arg	Gly	Gly	Ile 90	Pro	Cys	Ile	Phe	Asn 95	His
Gln	Trp	Ser	Asn 100	Glu	Arg	Ile	His	Gln 105	Leu	Val	Lys	Ser	Tyr 110	Asp	Ile
Gln	Trp	Leu 115	Ile	Lys	Asp	Asn 120	His	Leu	Thr	Ser	Asn 125	His	Asp	Asn	Ser
Ile	Tyr 130	Asn	Asp	Glu	Val	Ile 135	Pro	Arg	Asn	Val 140	Ile	His	Ile	Gly	Phe
Thr 145	Ser	Gly	Thr	Thr	Gly 150	Leu	Pro	Lys	Ala	Phe 155	Tyr	Arg	Asn	Glu	His
Ser	Trp	Ile	Val	Ser 165	Phe	Lys	Glu	Asn	Glu 170	Lys	Leu	Leu	Gln	His 175	Cys
Glu	Glu	Thr	Ile	Val	Ala	Pro	Gly	Pro	Leu	Ser	His	Ser	Leu	Ser	Leu

180 185 190
 Tyr Ala Cys Ile Tyr Ala Leu Ser Thr Gly Lys Thr Phe Ile Gly Gln
 195 200 205
 Lys Asn Phe Asn Pro Leu Ser Leu Met Arg Leu Ile Asn Gln Leu Asn
 210 215 220
 Lys Thr Thr Ala Ile Phe Val Val Pro Thr Met Val Gln Gln Leu Ile
 225 230 235 240
 Ser Thr Gln Arg His Cys Ser Ser Ile Lys Ser Ile Leu Ser Ser Gly
 245 250 255
 Ala Lys Leu Thr Leu Gln Gln Phe Gln Gln Ile Arg Asn Leu Tyr Pro
 260 265 270
 Gln Ala Asn Leu Ile Glu Phe Phe Gly Thr Ser Glu Ala Ser Phe Ile
 275 280 285
 Ser Tyr Asn Phe Asn Gln Ser Ser Pro Ala Asn Ser Val Gly Lys Leu
 290 295 300
 Phe Pro His Val Glu Thr Arg Leu Leu Asn Gln Asp Asp Asp Ala Val
 305 310 315 320
 Gly Leu Leu Ala Val Arg Ser Glu Met Val Phe Ser Gly Tyr Val Gly
 325 330 335
 Gln Ser Asn Gln Glu Gly Ala Trp Ile Lys Thr Gly Asp Phe Ala Tyr
 340 345 350
 Ile Lys Asn Gln His Leu Phe Leu Val Gly Arg Glu Ser Asp Arg Ile
 355 360 365
 Ile Val Gly Gly Ile Asn Val Tyr Pro Thr Ala Ile Glu Ser Leu Ile
 370 375 380
 Met Asp Ile Glu Gly Ile Asp Glu Ala Leu Val Ile Gly Ile Pro His
 385 390 395 400
 Ala Lys Phe Gly Glu Ile Ala Ile Leu Leu Tyr Ser Gly Lys Val Gln
 405 410 415
 Leu Asn Tyr Arg Gln Ile Lys Ser Phe Leu Met Lys His Leu Ser Arg
 420 425 430
 Gln Glu Val Pro Ser Lys Leu Lys Lys Ile Asp His Met Ile Tyr Thr
 435 440 445
 Glu Ser Gly Lys Ile Ala Arg Lys Glu Met Lys Asn Lys Phe Ile Asn
 450 455 460
 Gly Glu Leu
 465

<210> 5292

<211> 65

<212> PRT

<213> S.epidermidis

<400> 5292

Glu His Cys Asn Ser Asp Cys His Asn Ser His Asn Ser Lys Val Leu
 1 5 10 15
 Ser Ser Gln Leu Phe Thr Phe Thr His Tyr Asn Thr Asn Ile Leu Tyr
 20 25 30
 Ile Ser Ile Val Leu Asn Val Lys Leu Met Arg His Ala Ile Ile Ser
 35 40 45
 Ser Pro Tyr Ser Ile Leu Phe Ala Tyr Tyr Phe Leu Ile Gln Asn Phe
 50 55 60
 Phe
 65

<210> 5293

<211> 40
 <212> PRT
 <213> S.epidermidis

<400> 5293
 Pro Ile Ser Asn Lys Ala Lys Ile Ile His Glu Ile Leu Asn Asn Arg
 1 5 10 15
 Val Ser Arg Ile Ala Phe Leu Gly Ser Lys Ile Leu Asp Ile Ser Asn
 20 25 30
 Val Leu Gly Met Asp Phe Leu Lys
 35 40

<210> 5294
 <211> 162
 <212> PRT
 <213> S.epidermidis

<400> 5294
 Ser Met Ser Lys Leu Phe Glu Leu Lys Asp Ser Tyr Gln Gln Val Tyr
 1 5 10 15
 Asp Leu Ile Ala Glu Gln Glu Asp Glu Gln Ile Leu Lys Asp Thr Leu
 20 25 30
 Ala Ser Ile Asn Asp Ala Ile Glu Asp Lys Ala Asp Gly Tyr Val Ala
 35 40 45
 Val Ile Lys Ser Leu Glu Ala Asp Asn Asn Ala Ile Asp Glu Glu Ile
 50 55 60
 Lys Arg Leu Arg Gln Arg Lys Thr Ser Asn Gln Asn Gly Val Lys Arg
 65 70 75 80
 Leu Lys Glu Ser Leu Gln Glu Val Met Glu Gln Thr Gly Lys Glu Lys
 85 90 95
 Phe Lys Thr Ala Leu Asn Ser Tyr Ser Ile Ala Asn Asn Pro Pro Ser
 100 105 110
 Leu Asp Val Thr Asp Glu Ser Leu Ile Pro Lys Gln Tyr Tyr Ile Glu
 115 120 125
 Gln Lys Pro Lys Leu Asp Lys Lys Glu Leu Leu Lys Ala Ile Lys Asp
 130 135 140
 Gly Leu Glu Leu Lys Gly Val Glu Leu Lys Gln Ser Arg Ser Leu Arg
 145 150 155 160
 Val Arg

<210> 5295
 <211> 67
 <212> PRT
 <213> S.epidermidis

<400> 5295
 Phe Lys Ile Asn Arg Leu Asn Ser Ser Leu Phe Ile Phe Leu Ser Phe
 1 5 10 15
 Gly Lys Arg Met Ile Lys Lys Ile Asn Pro Ile Thr Asn Gln Ile Pro
 20 25 30
 Lys Ala Met Tyr Asp Gly Ile Glu Ser Ala Ala Gly Glu Pro Gly Ile
 35 40 45
 Ser Asn Lys His Lys Asn Thr Lys Asp Thr Ile Asp Pro Ile Ile Pro
 50 55 60
 Lys Ile Leu

65

<210> 5296

<211> 48

<212> PRT

<213> S.epidermidis

<400> 5296

Ile	Ser	Ser	Lys	Val	Leu	Leu	Ala	Ser	Thr	Phe	Asn	Ile	Leu	Thr	Leu
1				5					10					15	
Phe	Val	Thr	Ser	Ser	Gln	Gln	Leu	Ile	Phe	Ala	Phe	Ile	Asn	Lys	Ile
			20					25					30		
Gln	Ser	Thr	Ser	Lys	Phe	His	Ser	Asn	Tyr	Tyr	Asn	Ile	Tyr	Asn	Leu
			35				40					45			

<210> 5297

<211> 141

<212> PRT

<213> S.epidermidis

<400> 5297

Lys	Ser	Val	Leu	Leu	Ala	Lys	Val	Lys	Tyr	Gly	Asn	Trp	Asp	Leu	Val
1				5					10					15	
Lys	Glu	Leu	Glu	Glu	Phe	Glu	Lys	Glu	Thr	Ile	Arg	Trp	Ala	Lys	Lys
			20					25					30		
Gly	Ile	Ala	Lys	Thr	Thr	Thr	Ile	Ile	His	Asn	Ser	Ile	Val	Ser	Asn
			35				40					45			
Met	Pro	Val	Asp	Thr	Gly	Tyr	Leu	Arg	Glu	Ser	Val	Ser	Met	Asp	Phe
			50			55					60				
Lys	Lys	Gly	Gly	Leu	Thr	Gly	Val	Ile	Asn	Ile	Gly	Ser	Glu	Tyr	Ala
65				70					75					80	
Val	Tyr	Val	Asn	Tyr	Gly	Thr	Gly	Ile	Tyr	Val	Val	Gly	Pro	Gly	Gly
			85					90						95	
Ser	Arg	Ala	Lys	Asn	Ile	Pro	Trp	Arg	Tyr	Lys	Asp	Ala	Asp	Gly	His
			100					105					110		
Trp	His	Thr	Thr	Lys	Gly	Gln	His	Ala	Gln	Pro	Phe	Trp	Glu	Pro	Ala
			115			120						125			
Ile	Asp	Glu	Gly	Arg	Ala	Phe	Phe	Asn	Lys	Tyr	Phe	Ser			
			130			135						140			

<210> 5298

<211> 317

<212> PRT

<213> S.epidermidis

<400> 5298

Met	Ala	Asn	Asn	Lys	Asp	Asn	Pro	Lys	Ile	Thr	Asn	Gln	Asn	Asp	Ile
1				5					10					15	
Asp	Asn	Tyr	Ile	Asp	Arg	Leu	Val	Asn	Gln	Ala	Asn	Lys	Glu	Ile	Glu
			20					25					30		
Thr	Leu	Phe	Ala	Lys	Arg	Leu	Lys	Glu	Ile	Lys	Gln	Ile	Ile	Ala	Asn
			35				40					45			
Met	Tyr	Glu	Lys	Tyr	Asp	Arg	Asp	Glu	Pro	Gln	Val	Thr	Trp	Thr	Glu
			50			55					60				
Phe	Asn	Lys	Tyr	Asn	Arg	Leu	Asn	Lys	Glu	Leu	Asn	Arg	Ile	Gly	Gln
65					70					75				80	

Ile Asn Glu Phe Ala Glu Ile Leu Tyr Val Ser Pro Phe Ser Ile Lys
 35 40 45
 Gln Trp Glu Glu Gly Lys Arg Ile Pro Asn Ile Lys Lys Ile Lys Leu
 50 55 60
 Ile Ala Phe Val Phe Lys Thr Thr Pro Glu Trp Leu Leu Tyr Gly Glu
 65 70 75 80

<210> 5301

<211> 111

<212> PRT

<213> S.epidermidis

<400> 5301

Lys Arg Ile Asn Lys Ile Glu Ser Thr Gln Cys Val Gly Phe Leu Ile
 1 5 10 15
 Tyr Leu Lys Gly Asp Met Ser Met Lys Thr Asp Val Gly Ser Ile Val
 20 25 30
 Arg Thr Ile Val Phe Ile Leu Ala Trp Val Asn Gln Phe Leu Ala Thr
 35 40 45
 Lys His Ile Ser Pro Ile Pro Val Asp Glu Val Thr Ile Ser Ser Ile
 50 55 60
 Ile Thr Gly Ala Ile Ser Leu Trp Thr Trp Trp Lys Asn Asn Asn Phe
 65 70 75 80
 Ser His Ala Ala Gln Lys Gly Gln Gln Lys Leu His Glu Val Lys Ala
 85 90 95
 Gly Thr Glu Asn Thr Asn Gly Lys Ala Pro Ile Gly Gly Asn Asp
 100 105 110

<210> 5302

<211> 125

<212> PRT

<213> S.epidermidis

<400> 5302

Arg Met Val Lys Ile Lys Lys Lys Val Glu Met Thr Leu Pro Glu Leu
 1 5 10 15
 Ile Glu Trp Ala Trp Lys Asn Gly Val Lys Glu Lys Ala Phe Tyr Ser
 20 25 30
 Asn Ile Asp Arg Gly Ser Val Tyr Phe Asp Met Val Gln Thr Val Ser
 35 40 45
 Ile Glu Tyr Ser Ile Val Val Asp Glu Thr Phe Thr Val Glu Val Glu
 50 55 60
 Glu Glu Val Thr Glu Glu Thr Lys Ile Pro Glu Met Leu Glu Ile Phe
 65 70 75 80
 Val Asn Gly Gly Gly Val Lys Arg Val Glu Lys Ser Ile Asn Glu Leu
 85 90 95
 Lys Asp Asp Phe Ser Lys Glu Phe Trp Leu Lys Asp Gly Asp Thr Met
 100 105 110
 Thr Leu Ile Trp Lys Asp Gly Glu Leu Val Gly Asp Glu
 115 120 125

<210> 5303

<211> 54

<212> PRT

<213> S.epidermidis

<400> 5303

Pro Lys Pro Asn Asn Asn Val Ala Pro Ile Thr Ile Asp Ala Val Pro
 1 5 10 15
 Thr Val Asn Phe Leu Ile Ala Tyr Leu Leu Asp Leu Phe Ala Ile Gly
 20 25 30
 Phe Phe Leu Val Ser Lys Leu Phe Phe Phe Asn His Lys Asn Ser Leu
 35 40 45
 Ser Leu Thr Ile Ser Met
 50

<210> 5304

<211> 67

<212> PRT

<213> S.epidermidis

<400> 5304

Ile Phe Thr Lys Ile Lys Ile Leu Gln Met Phe Trp Gln Ile Phe Tyr
 1 5 10 15
 Arg Arg Gly Lys Thr Met Lys Asn Tyr Asp Leu Ile Ile Ile Gly Phe
 20 25 30
 Gly Lys Ala Gly Lys Thr Leu Ala Ala His Ala Ala Ser His Gly Gln
 35 40 45
 Lys Val Ala Val Val Glu Arg Ser Thr Lys Met Tyr Gly Gly Thr Cys
 50 55 60
 Ile Asn Ile
 65

<210> 5305

<211> 461

<212> PRT

<213> S.epidermidis

<400> 5305

Leu Met Thr Asn Lys Thr Arg Ser Gln Ala His Ala Tyr Leu Asp Arg
 1 5 10 15
 Leu Lys Gly Tyr Trp Trp Asp Phe Asp Gly Val Tyr Gly Ala Gln Cys
 20 25 30
 Phe Asp Leu Ala Asn Gln Tyr Trp Tyr Tyr Val Thr Gly His Thr Leu
 35 40 45
 Ser Gly Met Tyr Ala Lys Asp Ile Pro Phe Val Asn Asp Phe Asn Gly
 50 55 60
 Tyr Ala Asn Val Val Lys Asn Tyr Asn Ser Tyr Ile Pro Lys Lys Gly
 65 70 75 80
 Thr Leu Val Val Phe Pro Tyr Glu Tyr Gly Asn Gly Cys Gly His Val
 85 90 95
 Ala Ile Ile Glu Ser Ala Thr Gln Asn Tyr Phe Tyr Ser Leu Asp Gln
 100 105 110
 Asn Trp Tyr Gly Gly Ala Arg Asn Asn Pro Pro Glu Val Ala Gln Thr
 115 120 125
 Ile Tyr His Glu Tyr His Pro Asp Met Tyr Phe Val Glu Pro Leu Tyr
 130 135 140
 Ser Lys Glu Thr Lys Val Ser Lys Ile Lys Ala Lys Thr Thr Lys Pro
 145 150 155 160
 Lys Pro Val Lys Lys Val Lys Lys Arg Lys Val Met Ile Val Ala Gly
 165 170 175
 His Gly Tyr Asn Asp Pro Gly Ala Ile Gly Asn Gly Tyr Asn Glu Arg

			180					185					190				
Asp	Phe	Ile	Arg	Lys	Asn	Ile	Val	Asp	Asn	Val	Ser	Lys	Tyr	Leu	Lys		
		195						200				205					
Asp	Ala	Gly	His	Thr	Val	Gly	Ile	Tyr	Gly	Lys	Lys	Gln	Asp	Met	Tyr		
	210						215				220						
Gln	Asp	Thr	Ala	Tyr	Gly	Val	Arg	Val	Gly	Asn	His	Arg	Asp	Tyr	Gly		
225					230					235					240		
Leu	Tyr	Trp	Val	Lys	Ser	Gln	Gly	Tyr	Asp	Thr	Val	Ile	Glu	Phe	His		
			245						250					255			
Leu	Asp	Ser	Ala	Gly	Pro	Lys	Ala	Thr	Gly	Gly	His	Thr	Ile	Ile	Pro		
		260						265					270				
Ala	Gly	Tyr	Pro	Ala	Asn	Ile	Thr	Asp	Lys	Asn	Ile	Gln	Ala	Ala	Leu		
	275						280					285					
Lys	Gln	Ser	Val	Gly	Thr	Ile	Arg	Gly	Ile	Thr	Gln	Arg	Asn	Asp	Leu		
	290					295					300						
Leu	Asn	Cys	Asn	Val	Ala	Asn	Asp	Ile	Gly	Ile	Glu	Tyr	Arg	Leu	Val		
305				310					315						320		
Glu	Leu	Gly	Phe	Ile	Thr	Ser	Tyr	Lys	Asp	Met	Lys	Tyr	Ile	Asn	Glu		
			325						330					335			
Asn	Ile	Lys	Pro	Phe	Thr	Lys	Ser	Ile	Ala	Ser	Asp	Ile	Asn	Gly	Lys		
		340						345					350				
Pro	Ile	Gly	Gly	Thr	Ser	Ala	Gly	Lys	Val	Lys	Ser	Val	Lys	Lys	Thr		
	355						360					365					
Trp	Asp	Trp	Lys	Gly	Arg	Phe	Tyr	Pro	Asn	Thr	Thr	Ile	Lys	Val	Arg		
	370					375						380					
Lys	Lys	Pro	Asn	Gly	Glu	Ile	Val	Glu	Lys	Gly	Ser	Trp	Leu	Tyr	Gly		
385				390					395						400		
Lys	Asp	Asp	Trp	Val	Asp	Ile	Val	Gln	Leu	Tyr	Lys	Asp	Thr	Lys	Lys		
			405					410						415			
Lys	Leu	Trp	Trp	Gly	Lys	Phe	Lys	Tyr	Pro	Thr	Asn	Pro	Ser	Ser	Gly		
		420						425					430				
Tyr	Phe	Tyr	Cys	Ala	Leu	Gly	Glu	Ile	Thr	Asp	Lys	Gln	Glu	Arg	Ile		
	435						440					445					
Lys	Lys	Glu	Lys	Lys	Leu	Tyr	Gly	Lys	Ile	Lys	Trp	Gln					
	450					455					460						

<210> 5306

<211> 70

<212> PRT

<213> S.epidermidis

<400> 5306

Val	His	Pro	Leu	Ile	Asn	Asn	Asp	Ile	Leu	Ile	Glu	Ser	Asp	Ile	Val		
1				5					10					15			
Val	Thr	Leu	Cys	Ser	Asp	Ala	Asp	Ala	Asn	Cys	Pro	Val	Leu	Pro	Lys		
		20					25					30					
Asn	Val	Thr	Lys	Glu	His	Trp	Gly	Phe	Asp	Asp	Pro	Ala	Gly	Lys	Asp		
	35						40					45					
Trp	Ser	Glu	Phe	Gln	Arg	Val	Arg	Asp	Glu	Ile	Lys	Ala	Ala	Ile	Glu		
	50					55					60						
Thr	Phe	Ala	His	Arg	Val												
65					70												

<210> 5307

<211> 196

<212> PRT

<213> S.epidermidis

<400> 5307

Lys Gln Gln Asn Asn Val Glu Gln Leu Leu Lys Val Asn Lys Met Ser
 1 5 10 15
 Glu Phe Asn Asn Tyr Arg Leu Ile Leu Glu Glu Leu Asp Ser Thr Leu
 20 25 30
 Ser Gln Val Asp Asn Thr Glu Tyr Glu Arg Phe Ala Asn Asp Val Ile
 35 40 45
 Gly Ala Asp Arg Ile Phe Thr Ala Gly Lys Gly Arg Ser Gly Phe Val
 50 55 60
 Ala Asn Ser Phe Ala Met Arg Leu Asn Gln Leu Gly Lys Asn Ala Tyr
 65 70 75 80
 Val Val Gly Glu Ser Thr Thr Pro Ser Ile Lys Glu His Asp Leu Phe
 85 90 95
 Ile Ile Ile Ser Gly Ser Gly Ser Thr Glu His Leu Arg Leu Leu Ala
 100 105 110
 Glu Lys Ala Gln Ser Glu Gly Ala Lys Ile Val Leu Leu Thr Thr Asn
 115 120 125
 Ala Glu Ser Pro Ile Gly Asn Leu Ala Glu Thr Val Val Glu Leu Pro
 130 135 140
 Ala Gly Thr Lys His Asp Val Glu Gly Ser Lys Gln Pro Leu Gly Ser
 145 150 155 160
 Leu Phe Glu Gln Ala Ser Leu Ile Phe Leu Asp Ser Val Val Leu Pro
 165 170 175
 Leu Met Asp Ala Phe His Ile Ser Glu Lys Thr Met Gln Glu Asn His
 180 185 190
 Ala Asn Leu Glu
 195

<210> 5308

<211> 231

<212> PRT

<213> S.epidermidis

<400> 5308

Met Ala Lys Lys Gly Lys Lys Tyr Gln Glu Ala Ala Ser Lys Val Asp
 1 5 10 15
 Arg Thr Gln Tyr Tyr Ser Val Glu Glu Ala Ile Lys Leu Ala Lys Glu
 20 25 30
 Thr Ser Val Ala Asn Phe Asp Ala Ser Val Glu Val Ala Phe Arg Leu
 35 40 45
 Gly Ile Asp Thr Arg Lys Asn Asp Gln Gln Ile Arg Gly Ala Val Val
 50 55 60
 Leu Pro His Gly Thr Gly Lys Ser Gln Arg Val Leu Val Phe Ala Lys
 65 70 75 80
 Gly Asp Lys Ile Thr Glu Ala Glu Glu Ala Gly Ala Asp Tyr Val Gly
 85 90 95
 Glu Ala Asp Tyr Val Gln Lys Ile Gln Gln Gly Trp Phe Asp Phe Asp
 100 105 110
 Val Val Val Ala Thr Pro Asp Met Met Gly Glu Val Gly Lys Leu Gly
 115 120 125
 Arg Val Leu Gly Pro Lys Gly Leu Met Pro Asn Pro Lys Thr Gly Thr
 130 135 140
 Val Thr Met Asp Val Lys Lys Ala Val Glu Glu Ile Lys Ala Gly Lys
 145 150 155 160

Val Glu Tyr Arg Ala Glu Lys Ala Gly Ile Val His Ala Ser Ile Gly
 165 170 175
 Lys Val Ser Phe Asp Glu Glu Lys Leu Val Asp Asn Phe Arg Thr Leu
 180 185 190
 Gln Asp Val Leu Ala Lys Ala Lys Pro Ala Ser Ala Lys Gly Thr Tyr
 195 200 205
 Phe Lys Ser Val Ala Val Thr Thr Thr Met Gly Pro Gly Val Lys Val
 210 215 220
 Asp Thr Ser Ser Phe Lys Leu
 225 230

<210> 5309

<211> 930

<212> PRT

<213> S.epidermidis

<400> 5309

Leu Lys Lys Asn Asn Leu Leu Thr Lys Lys Lys Pro Ile Ala Asn Lys
 1 5 10 15
 Ser Asn Lys Tyr Ala Ile Arg Lys Phe Thr Val Gly Thr Ala Ser Ile
 20 25 30
 Val Ile Gly Ala Thr Leu Leu Phe Gly Leu Gly His Asn Glu Ala Lys
 35 40 45
 Ala Glu Glu Asn Thr Val Gln Asp Val Lys Asp Ser Asn Met Asp Asp
 50 55 60
 Glu Leu Ser Asp Ser Asn Asp Gln Ser Ser Asn Glu Glu Lys Asn Asp
 65 70 75 80
 Val Ile Asn Asn Ser Gln Ser Ile Asn Thr Asp Asp Asp Asn Gln Ile
 85 90 95
 Lys Lys Glu Glu Thr Asn Ser Asn Asp Ala Ile Glu Asn Arg Ser Lys
 100 105 110
 Asp Ile Thr Gln Ser Thr Thr Asn Val Asp Glu Asn Glu Ala Thr Phe
 115 120 125
 Leu Gln Lys Thr Pro Gln Asp Asn Thr Gln Leu Lys Glu Glu Val Val
 130 135 140
 Lys Glu Pro Ser Ser Val Glu Ser Ser Asn Ser Ser Met Asp Thr Ala
 145 150 155 160
 Gln Gln Pro Ser His Thr Thr Ile Asn Ser Glu Ala Ser Ile Gln Thr
 165 170 175
 Ser Asp Asn Glu Glu Asn Ser Arg Val Ser Asp Phe Ala Asn Ser Lys
 180 185 190
 Ile Ile Glu Ser Asn Thr Glu Ser Asn Lys Glu Glu Asn Thr Ile Glu
 195 200 205
 Gln Pro Asn Lys Val Arg Glu Asp Ser Ile Thr Ser Gln Pro Ser Ser
 210 215 220
 Tyr Lys Asn Ile Asp Glu Lys Ile Ser Asn Gln Asp Glu Leu Leu Asn
 225 230 235 240
 Leu Pro Ile Asn Glu Tyr Glu Asn Lys Val Arg Pro Leu Ser Thr Thr
 245 250 255
 Ser Ala Gln Pro Ser Ser Lys Arg Val Thr Val Asn Gln Leu Ala Ala
 260 265 270
 Glu Gln Gly Ser Asn Val Asn His Leu Ile Lys Val Thr Asp Gln Ser
 275 280 285
 Ile Thr Glu Gly Tyr Asp Asp Ser Asp Gly Ile Ile Lys Ala His Asp
 290 295 300
 Ala Glu Asn Leu Ile Tyr Asp Val Thr Phe Glu Val Asp Asp Lys Val

305 310 315 320
 Lys Ser Gly Asp Thr Met Thr Val Asn Ile Asp Lys Asn Thr Val Pro
 325 330 335
 Ser Asp Leu Thr Asp Ser Phe Ala Ile Pro Lys Ile Lys Asp Asn Ser
 340 345 350
 Gly Glu Ile Ile Ala Thr Gly Thr Tyr Asp Asn Thr Asn Lys Gln Ile
 355 360 365
 Thr Tyr Thr Phe Thr Asp Tyr Val Asp Lys Tyr Glu Asn Ile Lys Ala
 370 375 380
 His Leu Lys Leu Thr Ser Tyr Ile Asp Lys Ser Lys Val Pro Asn Asn
 385 390 395 400
 Asn Thr Lys Leu Asp Val Glu Tyr Lys Thr Ala Leu Ser Ser Val Asn
 405 410 415
 Lys Thr Ile Thr Val Glu Tyr Gln Lys Pro Asn Glu Asn Arg Thr Ala
 420 425 430
 Asn Leu Gln Ser Met Phe Thr Asn Ile Asp Thr Lys Asn His Thr Val
 435 440 445
 Glu Gln Thr Ile Tyr Ile Asn Pro Leu Arg Tyr Ser Ala Lys Glu Thr
 450 455 460
 Asn Val Asn Ile Ser Gly Asn Gly Asp Glu Gly Ser Thr Ile Ile Asp
 465 470 475 480
 Asp Ser Thr Ile Ile Lys Val Tyr Lys Val Gly Asp Asn Gln Asn Leu
 485 490 495
 Pro Asp Ser Asn Arg Ile Tyr Asp Tyr Ser Glu Tyr Glu Asp Val Thr
 500 505 510
 Asn Asp Asp Tyr Ala Gln Leu Gly Asn Asn Asn Asp Val Asn Ile Asn
 515 520 525
 Phe Gly Asn Ile Asp Ser Pro Tyr Ile Ile Lys Val Ile Ser Lys Tyr
 530 535 540
 Asp Pro Asn Lys Asp Asp Tyr Thr Thr Ile Gln Gln Thr Val Thr Met
 545 550 555 560
 Gln Thr Thr Ile Asn Glu Tyr Thr Gly Glu Phe Arg Thr Ala Ser Tyr
 565 570 575
 Asp Asn Thr Ile Ala Phe Ser Thr Ser Ser Gly Gln Gly Gln Gly Asp
 580 585 590
 Leu Pro Pro Glu Lys Thr Tyr Lys Ile Gly Asp Tyr Val Trp Glu Asp
 595 600 605
 Val Asp Lys Asp Gly Ile Gln Asn Thr Asn Asp Asn Glu Lys Pro Leu
 610 615 620
 Ser Asn Val Leu Val Thr Leu Thr Tyr Pro Asp Gly Thr Ser Lys Ser
 625 630 635 640
 Val Arg Thr Asp Glu Glu Gly Lys Tyr Gln Phe Asp Gly Leu Lys Asn
 645 650 655
 Gly Leu Thr Tyr Lys Ile Thr Phe Glu Thr Pro Glu Gly Tyr Thr Pro
 660 665 670
 Thr Leu Lys His Ser Gly Thr Asn Pro Ala Leu Asp Ser Glu Gly Asn
 675 680 685
 Ser Val Trp Val Thr Ile Asn Gly Gln Asp Asp Met Thr Ile Asp Ser
 690 695 700
 Gly Phe Tyr Gln Thr Pro Lys Tyr Ser Leu Gly Asn Tyr Val Trp Tyr
 705 710 715 720
 Asp Thr Asn Lys Asp Gly Ile Gln Gly Asp Asp Glu Lys Gly Ile Ser
 725 730 735
 Gly Val Lys Val Thr Leu Lys Asp Glu Asn Gly Asn Ile Ile Ser Thr
 740 745 750
 Thr Thr Thr Asp Glu Asn Gly Lys Tyr Gln Phe Asp Asn Leu Asn Ser

```

      755              760              765
Gly Asn Tyr Ile Val His Phe Asp Lys Pro Ser Gly Met Thr Gln Thr
  770              775              780
Thr Thr Asp Ser Gly Asp Asp Asp Glu Gln Asp Ala Asp Gly Glu Glu
  785              790              795              800
Val His Val Thr Ile Thr Asp His Asp Asp Phe Ser Ile Asp Asn Gly
      805              810              815
Tyr Tyr Asp Asp Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser
      820              825              830
Asp Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp
      835              840              845
Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp
      850              855              860
Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser Gly Leu Asp
  865              870              875              880
Asn Ser Ser Asp Lys Asn Thr Lys Asp Lys Leu Pro Asp Thr Gly Ala
      885              890              895
Asn Glu Asp His Asp Ser Lys Gly Thr Leu Leu Gly Ala Leu Phe Ala
      900              905              910
Gly Leu Gly Ala Leu Leu Leu Gly Lys Arg Arg Lys Asn Arg Lys Asn
      915              920              925
Lys Asn
  930

```

```

<210> 5310
<211> 99
<212> PRT
<213> S.epidermidis

```

```

<400> 5310
Phe Met Lys Lys Ile Ile Ile Thr Gly Ala Leu Gly Gln Ile Gly Thr
  1              5              10              15
Glu Leu Val Ile Lys Cys Arg Glu Arg Tyr Gly Thr Glu Asn Val Leu
      20              25              30
Ala Thr Asp Ile Arg Lys Pro Glu Pro His Ser Pro Val Lys Asn Gly
      35              40              45
Pro Phe Glu Ile Leu Asp Val Thr Asp Arg Asn Arg Leu Phe Glu Thr
      50              55              60
Val Arg Tyr Phe Asn Ala Asp Thr Leu Met His Met Ala Ala Leu Leu
  65              70              75              80
Ser Ala Thr Ala Glu Lys Lys Pro Leu Val Ala Trp Asp Leu Asn Met
      85              90              95
Gly Asp Leu

```

```

<210> 5311
<211> 43
<212> PRT
<213> S.epidermidis

```

```

<400> 5311
Leu Ile Glu Lys Pro Arg Tyr Gln Asn Asn Gly Val Leu Thr Ser Gln
  1              5              10              15
Arg Ile Gln Val Val Phe Ala Leu Lys Ser Ile Leu Asn Arg Leu Asn
      20              25              30
Ile His Phe Gln Pro Asn Tyr Leu Ile Arg Lys

```


35

40

<210> 5312
 <211> 73
 <212> PRT
 <213> S.epidermidis

<400> 5312
 Gly Lys Glu Lys Ser Ile Leu Val Pro Ser Leu Leu Leu Lys Lys Leu
 1 5 10 15
 Ile Phe Asp Glu Asn Thr Asn Leu Ile Thr Glu Lys Ile Gly Asp Asp
 20 25 30
 Asn Asn Ile Thr Cys Asn Leu Ile Lys Val Val Phe Tyr Leu Tyr Cys
 35 40 45
 Ile His Asn Lys Ile Asn Ile Tyr Phe Glu Tyr Leu Glu Asn Ser Leu
 50 55 60
 Asn Ser Arg Ile Thr Ile Asp Ile Ile
 65 70

<210> 5313
 <211> 164
 <212> PRT
 <213> S.epidermidis

<400> 5313
 Asn Val Arg Asn His Ile Tyr Ser Gln Cys Leu Lys Asn Thr Leu Val
 1 5 10 15
 Val Asn Gly Val Arg Thr Leu Trp Lys Met Thr Ser Ser Leu Glu Arg
 20 25 30
 Leu Arg Asn Asp Met Asn Ile Lys Leu Ile Lys Glu Lys Ile Asp Asn
 35 40 45
 Glu Asn Lys Arg Met Gly Ser Glu Leu Glu Tyr Thr Phe Lys Tyr Lys
 50 55 60
 Gly His Lys Cys Lys Val Lys Arg Ile Glu Glu Tyr Gly His Leu Cys
 65 70 75 80
 Gly Tyr Ile Tyr Leu Asn Val Lys Arg Gly Ser Glu Glu Tyr Glu Ile
 85 90 95
 Ile Asp Glu Leu Ala His Cys Gly Val Ser Tyr His Lys Gly Asn Leu
 100 105 110
 Ile Gly Phe Asp Cys Ala His Ala Gly Asp Phe Ser Leu Arg Met Tyr
 115 120 125
 Asn Leu Phe Glu Asn Lys Thr Tyr Leu Ser Asp Leu Glu Thr Tyr Lys
 130 135 140
 Asp Leu Glu Tyr Val Glu Asn Asn Ile Lys Glu Ile Ile Asp Ser Leu
 145 150 155 160
 Gln Lys Gly Gly

<210> 5314
 <211> 187
 <212> PRT
 <213> S.epidermidis

<400> 5314
 Asn Val Gly Lys Gln Arg Lys Met Thr Tyr Phe Lys Trp Gln Asp Lys
 1 5 10 15

His Val Lys Phe Leu Lys Glu Asn Ala Asn Gly Asn Asn Ser Glu Asp
 20 25 30
 Leu Thr Gln Ser Phe Asn Asn Arg Phe Gly Thr Asn Gln Ser Lys Ser
 35 40 45
 Ser Leu Lys Ser Lys Met Tyr Gln Ile Gly Ile Lys Phe Asn Asn Asn
 50 55 60
 Thr Gly Arg Phe Lys Lys Gly Asp His Ser Tyr Asn Thr Tyr Ala Ile
 65 70 75 80
 Gly Thr Lys Ser Ile Asp Lys Asp Gly Tyr Val Ile Ile Lys His Ser
 85 90 95
 Asn Ser Lys Gly Asp Tyr Asn Lys Asn Trp Lys Leu Tyr His His Tyr
 100 105 110
 Leu Trp Glu Gln Lys His Gly Arg Ile Pro Glu Gly Tyr Val Val Ile
 115 120 125
 Phe Leu Asn Gly Asp Asn Arg Asp Phe Arg Ile Lys Asn Leu Tyr Cys
 130 135 140
 Val Glu Arg Gly Val Trp Leu Lys Val Ile Asn Asn Asp Met Arg Phe
 145 150 155 160
 Asp Asn Pro Glu Leu Val Glu Ser Ala Ile His Leu Ser Lys Leu Met
 165 170 175
 Ile Lys Gln Lys Asn Ile Glu Lys Arg Arg Arg
 180 185

<210> 5315

<211> 192

<212> PRT

<213> S.epidermidis

<400> 5315

Val Arg Cys Leu Lys Leu Leu Cys Glu Asn Cys His Phe Asn Glu Ala
 1 5 10 15
 Glu Val Lys Leu Thr Val Lys Gly Ile Asp Ser Thr His Glu Lys Trp
 20 25 30
 Val Cys Ser Val Cys Ala Gln Gly Glu Asn Pro Trp Leu His Ser Asn
 35 40 45
 Asp Asp Asn Thr Tyr His Thr His Gln Asp Asp Ile Glu Glu Ala Phe
 50 55 60
 Val Val Lys Gln Ile Leu Gln His Leu Ala Ala Lys His Gly Ile Asn
 65 70 75 80
 Phe His Glu Met Ala Phe Lys Glu Glu Lys Lys Cys Pro Thr Cys Gln
 85 90 95
 Met Thr Leu Lys Asp Ile Ala His Val Gly Lys Leu Gly Cys Ala Asp
 100 105 110
 Cys Tyr Ala Thr Phe Lys Glu Asp Ile Ile Asp Ile Val Gln Arg Val
 115 120 125
 Gln Gly Gly Gln Phe Glu His Val Gly Lys Thr Pro Gln Ser Ser Tyr
 130 135 140
 Lys Lys Leu Ala Ile Lys Lys Gln Ile Glu Glu Lys Ser Lys Tyr Leu
 145 150 155 160
 Asn Lys Leu Ile Asp Gly Gln Glu Phe Glu Glu Ala Ala Ile Val Arg
 165 170 175
 Asp Glu Ile Lys Ala Leu Lys Ser Glu Ser Glu Val Ser His Asp Glu
 180 185 190

<210> 5316

<211> 1215

<212> PRT

<213> S.epidermidis

<400> 5316

```

Ser Lys Leu Lys Glu Val Gly Ser Leu Ile Asp Val Asn Asn Phe His
1      5      10      15
Tyr Met Lys Ile Gly Leu Ala Ser Pro Glu Lys Ile Arg Ser Trp Ser
      20      25      30
Tyr Gly Glu Val Lys Lys Pro Glu Thr Ile Asn Tyr Arg Thr Leu Lys
      35      40      45
Pro Glu Lys Asp Gly Leu Phe Cys Glu Arg Ile Phe Gly Pro Thr Lys
      50      55      60
Asp Trp Glu Cys Ser Cys Gly Lys Tyr Lys Arg Val Arg Tyr Lys Gly
65      70      75      80
Met Val Cys Asp Arg Cys Gly Val Glu Val Thr Lys Ser Lys Val Arg
      85      90      95
Arg Glu Arg Met Gly His Ile Glu Leu Ala Ala Pro Val Ser His Ile
      100     105     110
Trp Tyr Phe Lys Gly Ile Pro Ser Arg Met Gly Leu Leu Leu Asp Met
      115     120     125
Ser Pro Arg Ala Leu Glu Glu Val Ile Tyr Phe Ala Ser Tyr Val Val
      130     135     140
Val Asp Pro Gly Pro Thr Gly Leu Glu Lys Lys Thr Leu Leu Ser Glu
145     150     155     160
Ala Glu Phe Arg Glu Tyr Tyr Asp Lys Tyr Pro Asn Gln Phe Val Ala
      165     170     175
Lys Met Gly Ala Glu Gly Ile Lys Asp Leu Leu Glu Glu Ile Asp Leu
      180     185     190
Asp Glu Glu Leu Lys Glu Leu Arg Asp Glu Leu Glu Ser Ala Thr Gly
      195     200     205
Gln Arg Leu Thr Arg Ala Ile Lys Arg Leu Glu Val Val Glu Ser Phe
      210     215     220
Arg Asn Ser Gly Asn Asn Pro Ser Trp Met Ile Leu Asp Val Leu Pro
225     230     235     240
Ile Ile Pro Pro Glu Ile Arg Pro Met Val Gln Leu Asp Gly Gly Arg
      245     250     255
Phe Ala Thr Ser Asp Leu Asn Asp Leu Tyr Arg Arg Val Ile Asn Arg
      260     265     270
Asn Asn Arg Leu Lys Arg Leu Leu Asp Leu Gly Ala Pro Gly Ile Ile
      275     280     285
Val Gln Asn Glu Lys Arg Met Leu Gln Glu Ala Val Asp Ala Leu Ile
      290     295     300
Asp Asn Gly Arg Arg Gly Arg Pro Val Thr Gly Pro Gly Asn Arg Pro
305     310     315     320
Leu Lys Ser Leu Ser His Met Leu Lys Gly Lys Gln Gly Arg Phe Arg
      325     330     335
Gln Asn Leu Leu Gly Lys Arg Val Asp Tyr Ser Gly Arg Ser Val Ile
      340     345     350
Ala Val Gly Pro Ser Leu Lys Met Tyr Gln Cys Gly Leu Pro Lys Glu
      355     360     365
Met Ala Leu Glu Leu Phe Lys Pro Phe Val Met Lys Glu Leu Val Gln
      370     375     380
Arg Glu Ile Ala Thr Asn Ile Lys Asn Ala Lys Ser Lys Ile Glu Arg
385     390     395     400
Met Asp Asp Glu Val Trp Asp Val Leu Glu Asp Val Ile Thr Glu His
      405     410     415

```

Pro Val Leu Leu Asn Arg Ala Pro Thr Leu His Arg Leu Gly Ile Gln
 420 425 430
 Ala Phe Glu Pro Thr Leu Val Glu Gly Arg Ala Ile Arg Leu His Pro
 435 440 445
 Leu Val Thr Thr Ala Tyr Asn Ala Asp Phe Asp Gly Asp Gln Met Ala
 450 455 460
 Val His Val Pro Leu Ser Lys Glu Ala Gln Ala Glu Ala Arg Met Leu
 465 470 475 480
 Met Leu Ala Ala Gln Asn Ile Leu Asn Pro Lys Asp Gly Lys Pro Val
 485 490 495
 Val Thr Pro Ser Gln Asp Met Val Leu Gly Asn Tyr Tyr Leu Thr Leu
 500 505 510
 Glu Arg Lys Asp Ala Val Asn Thr Gly Ala Ile Phe Asn Asp Thr Asn
 515 520 525
 Glu Val Leu Lys Ala Tyr Ala Asn Gly Tyr Val His Leu His Thr Arg
 530 535 540
 Ile Gly Val His Ala Asn Ser Phe Asn Asn Pro Thr Phe Thr Asp Glu
 545 550 555 560
 Gln Asn Ser Lys Ile Leu Ala Thr Ser Val Gly Lys Ile Ile Phe Asn
 565 570 575
 Glu Ile Ile Pro Asp Ser Phe Ala Tyr Ile Asn Glu Pro Ser Gln Ala
 580 585 590
 Asn Leu Glu Arg Thr Thr Pro Asp Lys Tyr Phe Val Asp Pro Thr Gln
 595 600 605
 Leu Gly Glu Gly Gly Leu Lys Glu Tyr Phe Asp Asn Ala Glu Leu Ile
 610 615 620
 Glu Pro Phe Asn Lys Lys Phe Leu Gly Asn Ile Ile Ala Glu Val Phe
 625 630 635 640
 Asn Arg Phe Ser Ile Thr Asp Thr Ser Met Met Leu Asp Arg Met Lys
 645 650 655
 Asp Leu Gly Phe Lys Phe Ser Ser Lys Ala Gly Ile Thr Val Gly Val
 660 665 670
 Ser Asp Ile Val Val Leu Pro Asp Lys Gln Asp Ile Leu Asp Glu His
 675 680 685
 Glu Lys Leu Val Glu Arg Val Thr Lys Gln Tyr Asn Arg Gly Leu Ile
 690 695 700
 Thr Glu Asp Glu Arg Tyr Asn Ala Val Val Glu Ile Trp Thr Asp Ala
 705 710 715 720
 Lys Asp Gln Ile Gln Gly Glu Leu Met Gln Ser Leu Glu Lys Thr Asn
 725 730 735
 Pro Ile Phe Met Met Ser Asp Ser Gly Ala Arg Gly Asn Ala Ser Asn
 740 745 750
 Phe Thr Gln Leu Ala Gly Met Arg Gly Leu Met Ala Ala Pro Ser Gly
 755 760 765
 Lys Ile Ile Glu Leu Pro Ile Thr Ser Ser Phe Arg Glu Gly Leu Thr
 770 775 780
 Val Leu Glu Tyr Phe Ile Ser Thr His Gly Ala Arg Lys Gly Leu Ala
 785 790 795 800
 Asp Thr Ala Leu Lys Thr Ala Asp Ser Gly Tyr Leu Thr Arg Arg Leu
 805 810 815
 Val Asp Val Ala Gln Asp Val Ile Val Arg Glu Glu Asp Cys Gly Thr
 820 825 830
 Asp Arg Gly Leu Leu Val Ser Asp Ile Lys Glu Gly Thr Glu Met Ile
 835 840 845
 Glu Pro Phe Ile Glu Arg Ile Glu Gly Arg Tyr Ser Lys Glu Thr Ile
 850 855 860

Arg His Pro Glu Thr Asp Glu Val Ile Ile Arg Pro Asp Glu Leu Ile
 865 870 875 880
 Thr Pro Asp Ile Ala Lys Gln Ile Thr Asp Ala Gly Ile Glu Gln Met
 885 890 895
 Tyr Ile Arg Ser Ala Phe Thr Cys Asn Thr Arg His Gly Val Cys Glu
 900 905 910
 Lys Cys Tyr Gly Lys Asn Leu Ala Thr Gly Glu Lys Val Glu Val Gly
 915 920 925
 Glu Ala Val Gly Thr Ile Ala Ala Gln Ser Ile Gly Glu Pro Gly Thr
 930 935 940
 Gln Leu Thr Met Arg Thr Phe His Thr Gly Gly Val Ala Gly Ser Asp
 945 950 955 960
 Ile Thr Gln Gly Leu Pro Arg Ile Gln Glu Ile Phe Glu Ala Arg Asn
 965 970 975
 Pro Lys Gly Gln Ala Val Ile Thr Glu Ile Glu Gly Val Val Asp Asp
 980 985 990
 Ile Lys Leu Ala Lys Asp Arg Gln Gln Glu Ile Ile Val Lys Gly Ala
 995 1000 1005
 Asn Glu Thr Arg Ser Tyr Leu Ala Ser Gly Thr Ser Arg Leu Lys Val
 1010 1015 1020
 Glu Ile Gly Gln Ser Val Glu Arg Gly Glu Val Leu Thr Glu Gly Ser
 1025 1030 1035 1040
 Ile Glu Pro Lys Asn Tyr Leu Ser Val Ala Gly Leu Asn Ala Thr Glu
 1045 1050 1055
 Ser Tyr Leu Leu Lys Glu Val Gln Lys Val Tyr Arg Met Gln Gly Val
 1060 1065 1070
 Glu Ile Asp Asp Lys His Val Glu Val Met Val Arg Gln Met Leu Arg
 1075 1080 1085
 Lys Val Arg Ile Ile Glu Ala Gly Asp Thr Lys Leu Leu Pro Gly Ser
 1090 1095 1100
 Leu Val Asp Ile His Asn Phe Thr Asp Ala Asn Arg Asp Ala Phe Lys
 1105 1110 1115 1120
 His Arg Lys Arg Pro Ala Thr Ala Lys Pro Val Leu Leu Gly Ile Thr
 1125 1130 1135
 Lys Ala Ser Leu Glu Thr Glu Ser Phe Leu Ser Ala Ala Ser Phe Gln
 1140 1145 1150
 Glu Thr Thr Arg Val Leu Thr Asp Ala Ala Ile Lys Gly Lys Arg Asp
 1155 1160 1165
 Asp Leu Leu Gly Leu Lys Glu Asn Val Ile Ile Gly Lys Leu Ile Pro
 1170 1175 1180
 Ala Gly Thr Gly Met Arg Arg Tyr Ser Asp Ile Gln Tyr Asp Lys Ala
 1185 1190 1195 1200
 Thr Ala Pro Val Thr Glu Thr Ser Glu Glu Val Glu Thr Ile Glu
 1205 1210 1215

<210> 5317

<211> 218

<212> PRT

<213> S.epidermidis

<400> 5317

Lys Arg Met Lys Trp Ser Glu Val Phe His Asp Ile Thr Thr Arg His
 1 5 10 15
 Asp Phe Gln Ala Met His Asp Phe Leu Glu Lys Glu Tyr Thr Thr Gln
 20 25 30
 Thr Val Tyr Pro Asp Lys Gln Asn Ile Tyr Gln Ala Phe Asp Leu Thr

```
<210> 5318
<211> 75
<212> PRT
<213> S.epidermidis
```

```
<210> 5319
<211> 460
<212> PRT
<213> S.epidermidis
```

<400> 5319															
Gly	Val	Met	Asn	Tyr	Glu	Arg	Ser	Tyr	Leu	Arg	Ser	Cys	Gln	Val	Arg
1				5					10					15	
Thr	Leu	Glu	Gln	Lys	Glu	Val	Gly	Tyr	Ser	Ile	Glu	Glu	Gln	Glu	Arg
			20					25					30		
Lys	Leu	Lys	Ser	Phe	Cys	Glu	Ile	Asn	Asp	Trp	Ser	Val	Ser	Asp	Val
		35					40					45			
Phe	Ile	Asp	Ala	Gly	Phe	Ser	Gly	Ala	Lys	Arg	Asp	Arg	Pro	Glu	Leu
	50					55					60				
Gln	Arg	Met	Met	Asn	Asp	Ile	Lys	Arg	Phe	Asp	Leu	Val	Leu	Val	Tyr

65					70					75					80
Lys	Leu	Asp	Arg	Leu	Thr	Arg	Asn	Val	Arg	Asp	Leu	Leu	Asp	Leu	Leu
				85					90					95	
Glu	Val	Phe	Glu	Gln	Asn	Asn	Val	Ala	Phe	Arg	Ser	Ala	Thr	Glu	Val
			100					105					110		
Tyr	Asp	Thr	Ser	Thr	Ala	Met	Gly	Arg	Leu	Phe	Val	Thr	Leu	Val	Gly
		115					120					125			
Ala	Met	Ala	Glu	Trp	Glu	Arg	Glu	Thr	Ile	Arg	Glu	Arg	Val	Met	Met
		130				135					140				
Gly	Lys	Arg	Ala	Ala	Ile	Lys	Gln	Gly	Met	Ile	Leu	Thr	Pro	Pro	Pro
145					150					155					160
Phe	Tyr	Tyr	Asp	Arg	Val	Asp	Asn	Thr	Tyr	Ile	Pro	Asn	Asp	Tyr	Lys
			165					170						175	
Lys	Val	Val	Leu	Trp	Ala	Tyr	Asp	Glu	Val	Met	Lys	Gly	Asn	Ser	Ser
			180					185					190		
Lys	Ala	Ile	Ala	Arg	Lys	Leu	Asn	Asp	Ser	Asp	Ile	Pro	Pro	Pro	Asn
		195					200					205			
Gly	Lys	Arg	Trp	Glu	Asp	Arg	Thr	Ile	Thr	Arg	Ala	Leu	Arg	Asn	Pro
		210				215					220				
Ile	Thr	Arg	Gly	His	Tyr	Thr	Trp	Gly	Asp	Val	Phe	Ile	Glu	Asn	Ser
225					230					235					240
His	Glu	Pro	Ile	Ile	Thr	Glu	Glu	Met	Tyr	Gln	Gln	Ile	Lys	Glu	Arg
			245					250						255	
Leu	Glu	Glu	Arg	Ile	Asn	Thr	Lys	Ile	Val	Ser	His	Val	Ser	Val	Phe
			260					265					270		
Arg	Gly	Lys	Phe	Ile	Cys	Pro	Arg	Cys	Gly	Gly	Thr	Leu	Thr	Met	Asn
		275					280						285		
Thr	Ala	Thr	Arg	Lys	Arg	Lys	Lys	Gly	Tyr	Val	Thr	Tyr	Lys	Thr	Tyr
		290				295					300				
Tyr	Cys	Asn	Thr	Cys	Lys	Thr	Lys	Lys	Gln	Ser	Phe	Gly	Phe	Ser	Glu
305					310					315					320
Asn	Glu	Ala	Leu	Arg	Val	Phe	Arg	Asp	Tyr	Leu	Ser	Lys	Leu	Asp	Leu
			325					330						335	
Asp	Lys	Tyr	Glu	Val	Lys	Thr	Lys	Gln	Lys	Asp	Asp	Val	Val	Thr	Ile
			340					345					350		
Asp	Ile	Asp	Lys	Ile	Met	Glu	Gln	Arg	Lys	Arg	Tyr	His	Lys	Leu	Tyr
		355					360					365			
Ala	Lys	Gly	Leu	Met	Gln	Glu	Glu	Glu	Leu	Phe	Glu	Leu	Ile	Lys	Glu
		370				375					380				
Thr	Asp	Glu	Thr	Ile	Ala	Glu	Tyr	Glu	Lys	Gln	Lys	Glu	Leu	Val	Pro
385					390					395					400
Arg	Lys	Ser	Leu	Asp	Ile	Asp	Lys	Ile	Lys	Lys	Phe	Lys	Asn	Ala	Leu
			405					410					415		
Leu	Glu	Ser	Trp	Lys	Ile	Phe	Ser	Leu	Glu	Asp	Lys	Ala	Asp	Phe	Ile
			420					425					430		
Lys	Met	Ala	Ile	Lys	Ser	Ile	Asp	Ile	Asp	Tyr	Val	Lys	Leu	Lys	Asn
		435					440					445			
Arg	His	Ser	Ile	Lys	Ile	Asn	Asp	Ile	Glu	Phe	Tyr				
	450					455					460				

<210> 5320

<211> 49

<212> PRT

<213> S.epidermidis

<400> 5320

Ile Ile Val Lys Lys Val Pro Leu Asn Cys Glu Asn Cys Gly Asn Arg
 1 5 10 15
 Asn Tyr Asn Val Pro Lys Lys Glu Gly Ser Ala Thr Arg Leu Thr Leu
 20 25 30
 Lys Lys Tyr Cys Pro Arg Cys Asn Ala His Thr Val His Lys Glu Ser
 35 40 45
 Lys

<210> 5321

<211> 60

<212> PRT

<213> S.epidermidis

<400> 5321

Arg Lys Val Lys Phe Met Ile Thr Val Leu Val Ile Thr Ile Phe Phe
 1 5 10 15
 Ile Thr Val Thr Leu Ile Ile Trp Gln Pro Lys Gly Leu Asp Ile Gly
 20 25 30
 Ile Ser Ala Val Ile Gly Ala Leu Leu Ala Ile Val Thr Gly Val Val
 35 40 45
 Ser Val Ser Asp Ile Leu Glu Val Thr Ser Ile Val
 50 55 60

<210> 5322

<211> 286

<212> PRT

<213> S.epidermidis

<400> 5322

Lys Ile Lys Asn Asn Lys Trp Arg Met Glu Thr Met Thr Glu Leu Asn
 1 5 10 15
 Thr Lys Glu Met Lys Leu Asp Ala Leu Leu Lys Asp Met Gln Ser Val
 20 25 30
 Val Ile Ala Phe Ser Gly Gly Val Asp Ser Ser Leu Leu Leu Lys Lys
 35 40 45
 Ala Ile Asp Ile Leu Gly Val Asn Tyr Val Lys Pro Val Val Val Lys
 50 55 60
 Ser Glu Leu Phe Arg Asn Glu Glu Phe Glu Leu Ala Leu Lys Leu Gly
 65 70 75 80
 Gln Ser Leu Gly Val Glu Val Leu Glu Thr Glu Met Ser Glu Leu Gln
 85 90 95
 Asp Ala Asn Ile Val Lys Asn Thr Pro Glu Ser Trp Tyr Tyr Ser Lys
 100 105 110
 Arg Leu Met Tyr Ser Gln Leu Glu Asn Ile Lys Asn Lys Leu Gly Phe
 115 120 125
 Asn Tyr Val Leu Asp Gly Met Ile Met Asp Asp Leu Asp Asp Phe Arg
 130 135 140
 Pro Gly Leu Lys Ala Arg Asp Asp Phe Gly Val Arg Ser Val Leu Gln
 145 150 155 160
 Glu Ala Lys Leu Tyr Lys Ser Glu Val Arg Glu Leu Ser His Gln His
 165 170 175
 Asp Leu Pro Val Trp Asn Lys Pro Ala Leu Cys Ser Leu Ala Ser Arg
 180 185 190
 Ile Pro Tyr Gly Glu Glu Leu Ser Phe Thr Lys Val Asn Lys Val Asn
 195 200 205

Glu Ala Glu Lys Phe Ile Leu Ser Leu Gly Ile Asn His Val Arg Val
 210 215 220
 Arg Tyr His His Asn Ile Ala Arg Ile Glu Val Thr Glu Asp Gln Leu
 225 230 235 240
 Asn Asn Leu Leu Lys Leu Lys Asp Ser Ile Ile Leu His Leu Lys Glu
 245 250 255
 Leu Gly Phe Asp Tyr Val Thr Met Asp Leu Glu Gly Tyr Arg Thr Gly
 260 265 270
 Ser Met Asn Glu Ile Ile Asp Thr Lys Ser Thr Ser Phe Lys
 275 280 285

<210> 5323

<211> 164

<212> PRT

<213> S.epidermidis

<400> 5323

Lys Lys Glu Lys Cys Arg Met Lys Glu Pro Pro His Asn Arg Leu Thr
 1 5 10 15
 Phe Lys Glu Ser Met Thr Glu Gly Lys Tyr Leu Thr Thr Ile Thr Lys
 20 25 30
 Glu Asp Lys Ile Arg Tyr Lys Lys Leu Ser Val Glu Glu Lys Arg Lys
 35 40 45
 Val Leu Asn Asp Phe Asn Ala Ser Thr Pro Gln Lys Asp Asp Lys Val
 50 55 60
 Ser Leu Phe Asp Tyr Met Lys Arg Thr Met Leu Lys His Gly Leu Asp
 65 70 75 80
 Glu Val Thr Ser Ile Thr Glu Asn Ala Val Leu Lys Asn Glu Pro Gly
 85 90 95
 Lys His Ile Asp Ser Phe Met Thr Arg Leu Ser Ser Phe Ser Thr Thr
 100 105 110
 Lys Asp Gly Thr Thr Val Phe Thr Tyr Glu Leu Ile Asn Gln Asn Phe
 115 120 125
 Val Val Ile Lys Ile Leu Asp Glu Gln Leu Lys Gln Asn Lys Lys Ile
 130 135 140
 Ile Glu Gln Asn Asn Glu Ile Ile Ser Leu Leu Lys Gln Ile Ala Asn
 145 150 155 160
 Arg Gly Glu Met

<210> 5324

<211> 300

<212> PRT

<213> S.epidermidis

<400> 5324

Asn Lys Trp Lys Arg Gly Gln Leu Met Ile Lys Leu Ile Ala Thr Asp
 1 5 10 15
 Met Asp Gly Thr Leu Leu Asn Ala Gly His Glu Ile Thr Thr Met Asn
 20 25 30
 Gln Glu Ala Ile Lys Phe Ala Gln Ala Asn Gly Ile Thr Val Val Ile
 35 40 45
 Ala Thr Gly Arg Ala Phe Tyr Glu Ala Gln Thr Pro Val Ala Glu Thr
 50 55 60
 Asp Leu Lys Val Pro Tyr Ile Cys Leu Asn Gly Ala Glu Val Arg Asp
 65 70 75 80

Glu Ser Phe Asn Ile Met Ser Thr Ser His Leu Asn His Asp Leu Val
 85 90 95
 His Lys Ile Thr Thr Ala Leu Lys Asn Asn His Ile Tyr Tyr Gln Ile
 100 105 110
 Tyr Thr Asn Arg Gly Ile Tyr Thr Glu Asp Pro Lys Arg Asp Leu Ala
 115 120 125
 Ile Tyr Ile Asp Ile Ala Glu Arg Ala Gly Gln Lys Ala Asp Val Asp
 130 135 140
 Lys Ile Arg Asn Asn Ile Gln Lys Arg Ile Asp Asn Gly Thr Leu Lys
 145 150 155 160
 Val Val Asp Asn Tyr Asp Ser Ile Glu Asp Ile Pro Gly Glu Leu Ile
 165 170 175
 Met Lys Val Leu Ala Phe Asp Ala Asp Leu Ser Lys Ile Asp Gln Val
 180 185 190
 Gly Gln Ala Leu Ala Ser Ser Pro Asn Leu Ala Val Ser Ser Ser Ser
 195 200 205
 Arg Gly Asn Leu Glu Ile Thr His Ser Asn Ala Gln Lys Gly Ile Ala
 210 215 220
 Leu Ser Ala Ile Ala His Gln Leu Gly Ile Asp Leu Thr Asp Val Ile
 225 230 235 240
 Ala Ile Gly Asp Asn Leu Asn Asp Ile Ser Met Leu Glu Arg Val Gly
 245 250 255
 Tyr Pro Val Ala Met Asn Asn Ala Thr Asp Glu Val Lys His Ile Ala
 260 265 270
 Lys Tyr Val Thr Asp Thr Asn Glu Asn Ser Gly Val Gly Lys Ala Ile
 275 280 285
 Met Lys Ile Leu Lys Glu Glu Asn Asn Leu Glu Val
 290 295 300

<210> 5325

<211> 42

<212> PRT

<213> S.epidermidis

<400> 5325

Leu Arg Trp Lys Ile Leu Lys Thr Leu Val Lys Asn Leu Thr Met Phe
 1 5 10 15
 Thr Lys Leu Ser Phe Lys Val Asn Ile Phe His Asp Phe Asp Asn Ser
 20 25 30
 Leu Lys Glu Phe Tyr Asn Ile Lys Val Leu
 35 40

<210> 5326

<211> 43

<212> PRT

<213> S.epidermidis

<400> 5326

Asn Gln Phe Glu Ile Phe His Leu Asn Ile Val Pro Lys Phe Val Arg
 1 5 10 15
 Tyr Val Ser His Glu Thr Leu Ile Leu Thr Lys Ile Ile Tyr Lys Ile
 20 25 30
 Ser Val Asn Lys Phe Arg Lys Asn Asn Ser Ser
 35 40

<210> 5327

Lys Asp Lys Gly Ile Thr Ala Pro His His Asn Pro His Phe Asp Ile
 370 375 380
 Asp Glu Ser Ser Leu Lys Tyr Ala Ala Ser Glu Phe Leu Lys Ile Leu
 385 390 395 400
 Glu Ile Glu Asn Val Phe
 405

<210> 5331
 <211> 165
 <212> PRT
 <213> S.epidermidis

<400> 5331
 Lys Asn Ser Asp Phe Gly Lys Ser Val Asp Trp Ala Ile Gln Gly Thr
 1 5 10 15
 Asp Ala Arg Asn Gly Val Met Gln Glu Thr Lys Asp Glu Leu Asp Ser
 20 25 30
 Asp Asn Leu Asp Lys Tyr Ser Leu Lys Glu Ser Ala Asp Gln Asp Gln
 35 40 45
 Phe Lys Lys Ile Gln Ser Ala Phe Lys Gln Gln Glu Pro Ile Val Phe
 50 55 60
 Thr Ala Met Glu Pro Ser Trp Phe Ser Lys Glu Leu Asp Val Lys Met
 65 70 75 80
 Leu Lys Asp Pro Asp Asn Ile Tyr Gly Asn Asn Asn Gln His Ile Asp
 85 90 95
 Leu Val Phe Asn Lys Asp Phe Lys Glu Ala His Pro Ala Ala Tyr Thr
 100 105 110
 Val Ala Thr Arg Met Ala Asp Asp Trp Ser Lys Ser Asp Glu Asp Lys
 115 120 125
 Leu Ala Lys Lys Ile Phe Val Asp Asn Lys Asn Pro Glu Gln Val Ala
 130 135 140
 Lys Asp Tyr Val Asp Asp Asn Asp Asn Lys Val Asp Glu Trp Leu Glu
 145 150 155 160
 Gly Ile Glu Thr Ile
 165

<210> 5332
 <211> 187
 <212> PRT
 <213> S.epidermidis

<400> 5332
 Val Arg Ser Glu Asp Met Ser Glu Glu Val Gly Ala Lys Arg Trp Tyr
 1 5 10 15
 Ala Val His Thr Tyr Ser Gly Tyr Glu Asn Lys Val Lys Lys Asn Leu
 20 25 30
 Glu Lys Arg Val Glu Ser Met Asn Met Thr Glu Gln Ile Phe Arg Val
 35 40 45
 Val Ile Pro Glu Glu Glu Glu Thr Gln Val Lys Asp Gly Lys Ala Lys
 50 55 60
 Lys Leu Val Lys Lys Thr Phe Pro Gly Tyr Val Leu Val Glu Leu Ile
 65 70 75 80
 Met Thr Asp Glu Ser Trp Tyr Val Val Arg Asn Thr Pro Gly Val Thr
 85 90 95
 Gly Phe Val Gly Ser Ala Gly Ala Gly Ser Lys Pro Asn Pro Leu Leu
 100 105 110

Pro Glu Glu Val Arg Phe Ile Leu Lys Gln Met Gly Leu Lys Glu Lys
 115 120 125
 Thr Ile Asp Val Glu Leu Asp Val Gly Glu Gln Val Arg Ile Gln Ser
 130 135 140
 Gly Pro Phe Ala Asn Gln Ile Gly Glu Val Gln Glu Ile Glu Ala Asp
 145 150 155 160
 Lys Phe Lys Leu Thr Val Leu Val Asp Met Phe Gly Arg Glu Thr Pro
 165 170 175
 Val Glu Val Glu Phe Asp Gln Ile Glu Lys Leu
 180 185

<210> 5333

<211> 44

<212> PRT

<213> S.epidermidis

<400> 5333

Gln Leu Asn Glu Leu Lys Ile Ile Lys Lys Asn Tyr Lys Lys Asp Asn
 1 5 10 15
 Phe Tyr Ile Ile Ser Ile Glu Ile Val Phe Phe Tyr Leu Ser Trp Thr
 20 25 30
 Phe Leu Phe Gln Pro Leu Tyr Lys Ile Val Thr Lys
 35 40

<210> 5334

<211> 120

<212> PRT

<213> S.epidermidis

<400> 5334

Asn His Leu Asp Val Tyr Val Gly Leu Val Ile Met Phe Asn Pro Leu
 1 5 10 15
 Asp Glu Phe Pro His Thr Ile Glu Leu Gly Ser Arg Glu Val Val Gly
 20 25 30
 Glu Tyr Pro Arg Glu Gln Glu Arg Phe Lys Ser Glu Lys Thr Ile Gln
 35 40 45
 Gly Phe Met Asp Thr Pro Thr Ser Ser Glu Gln Leu Lys Phe His Gln
 50 55 60
 Met Asn Gln Ser Tyr Asp Arg Asn Leu Tyr Thr Pro Tyr Ser Leu Pro
 65 70 75 80
 Ile Thr Asn Thr Asn Leu Phe Lys Tyr Asn Gly Lys Thr Tyr Glu Val
 85 90 95
 Val Gly Glu Pro Val Asp Gln Gly Gly Gln Gln Glu Ile Asn Leu Thr
 100 105 110
 Arg Leu Lys Glu Cys Pro Ile Gly
 115 120

<210> 5335

<211> 69

<212> PRT

<213> S.epidermidis

<400> 5335

Lys Val Ile Glu Cys Gly Gly Leu Met Met Ala Lys Lys Glu Ser Phe
 1 5 10 15
 Phe Lys Gly Val Lys Ser Glu Met Glu Lys Thr Ser Trp Pro Thr Lys

```
<210> 5336
<211> 293
<212> PRT
<213> S.epidermidis
```

```
<210> 5337
<211> 109
<212> PRT
```

<213> S.epidermidis

<400> 5337

Gly Met Ala Glu Val Thr Lys Glu Gln Leu Leu Glu Phe Ile Arg Asn
 1 5 10 15
 Asn Glu Leu Asp Leu Asp Glu Ser Tyr Pro Arg Ser Asp Trp Trp Lys
 20 25 30
 Phe Arg Asn Glu Arg Asp Ser Leu Arg Lys Gln Arg Asp Glu Leu Ile
 35 40 45
 Asn Asp Met Ala Glu Thr Lys Arg Lys Ala Glu Ala Phe Asp Glu Ile
 50 55 60
 Val Lys Val Leu Ala Ser Ile Ser Lys Glu Ile Val Glu Tyr Pro Gly
 65 70 75 80
 Asp Asn Asp Lys Gln Lys Glu Val Ile Tyr Lys Arg Tyr Asp Asp Leu
 85 90 95
 Phe Glu Pro Met Lys Leu Leu Glu Val Asn Asp Glu Arg
 100 105

<210> 5338

<211> 83

<212> PRT

<213> S.epidermidis

<400> 5338

Phe Leu Gln Glu Asn Ala Glu Val Leu Trp Met Lys Val Tyr Glu Tyr
 1 5 10 15
 Gln Gln Leu Leu Gly Phe Met Tyr Arg Glu Asp Tyr Lys Glu Asp Pro
 20 25 30
 Ile Ile Ala Lys Ile Leu Ile Glu Ser Gly Trp Ala Val Lys Arg Leu
 35 40 45
 Leu Asp Thr Gly Thr Ile Lys Pro Phe Asp Asp Tyr Glu Glu Val Lys
 50 55 60
 Glu Leu Ile Met Asn Glu Thr Lys Trp Arg Gln Pro Asp Gly Thr Tyr
 65 70 75 80
 Arg Arg Thr

<210> 5339

<211> 183

<212> PRT

<213> S.epidermidis

<400> 5339

Met Thr Lys Glu Leu Glu Ile Lys Leu Leu Thr Glu Asn Ala Thr Met
 1 5 10 15
 Pro Lys Arg Asp Arg Leu Asp Ala Gly Tyr Asp Ile Tyr Ser Ala Glu
 20 25 30
 Thr Val Ile Leu Glu Pro Gln Glu Lys Ala Thr Ile Arg Thr Asp Ile
 35 40 45
 Ala Val Asn Ile Pro Glu Gly Tyr Val Gly Leu Leu Thr Ser Arg Ser
 50 55 60
 Gly Val Ser Ser Lys Thr His Leu Val Ile Glu Thr Gly Lys Ile Asp
 65 70 75 80
 Ala Gly Phe Gln Gly Asn Met Lys Ile Asn Ile Lys Asn Asp Ile Glu
 85 90 95
 Val Val Asp Ala Asp Glu Phe Ile Tyr Lys Asp Ile Lys Asn Glu Ile

			100					105				110					
Ile	Asp	Asp	Gly	Ser	Phe	Asn	Glu	Pro	Ile	Glu	Glu	Gln	Ser	Ser	Asn		
		115					120					125					
Pro	Leu	Asp	Ile	Phe	Lys	Pro	Arg	Asn	Thr	Ser	Tyr	Val	Ile	Lys	Lys		
		130				135						140					
Gly	Asp	Lys	Leu	Ala	Gln	Leu	Val	Ile	Val	Pro	Ile	Trp	Thr	Pro	Glu		
145					150					155					160		
Leu	Lys	Glu	Ile	Glu	Glu	Phe	Ser	Ser	Gly	Ser	Glu	Arg	Gly	Glu	Gln		
				165					170					175			
Gly	Phe	Gly	Ser	Thr	Gly	Phe											
			180														

<210> 5340

<211> 83

<212> PRT

<213> S.epidermidis

<400> 5340

Thr	Met	Lys	Asp	Lys	Asp	Tyr	Lys	Ser	Leu	Trp	Ile	Lys	Leu	Lys	Glu		
1				5					10					15			
Lys	Lys	Leu	Lys	Glu	Tyr	Val	Glu	Val	His	Arg	Ser	Val	Asn	Gln	Ile		
			20					25					30				
Ile	Thr	Pro	Tyr	Asn	Gln	Tyr	His	Leu	Phe	Glu	Ile	Ala	Asn	Glu	Met		
		35				40						45					
Val	Ser	Glu	Asn	Glu	Leu	Lys	Arg	Asp	Leu	Lys	Tyr	Met	Asp	Gln	Leu		
	50					55					60						
Asp	Gly	Thr	His	Glu	Phe	Gln	Asn	Leu	Leu	Ser	Asp	Leu	Glu	Ala	Cys		
65					70					75					80		
Asn	Gly	Gln															

<210> 5341

<211> 208

<212> PRT

<213> S.epidermidis

<400> 5341

Met	Thr	Glu	Glu	Thr	Leu	Phe	Asn	Gln	Leu	Asn	Gln	Lys	Asp	Val	Asn		
1				5					10					15			
Asp	His	Val	Glu	Lys	Lys	Asn	Gly	Leu	Thr	Tyr	Leu	Ala	Trp	Ser	Tyr		
			20					25					30				
Ala	His	Gln	Glu	Leu	Lys	Lys	Ile	Asp	Ser	Asn	Tyr	Ser	Ile	Lys	Thr		
		35				40						45					
His	Glu	Phe	Val	His	Pro	Asp	Val	Pro	Leu	Asp	Asn	Tyr	Phe	Val	Pro		
	50					55					60						
Tyr	Leu	Ala	Thr	Pro	Glu	Gly	Tyr	Phe	Val	Gln	Val	Ser	Val	Thr	Val		
65					70					75					80		
Lys	Gly	Gln	Thr	Glu	Thr	Glu	Trp	Leu	Pro	Val	Leu	Asp	Phe	Arg	Asn		
				85					90					95			
Lys	Ser	Leu	Ala	Lys	Gly	Ser	Ala	Thr	Phe	Asp	Ile	Asn	Lys	Ala			
			100					105				110					
Gln	Lys	Arg	Cys	Phe	Val	Lys	Ala	Ala	Ala	Leu	His	Gly	Leu	Gly	Leu		
		115					120					125					
Tyr	Ile	Tyr	Asn	Gly	Glu	Glu	Val	Pro	Ser	Ala	Asn	Asp	Asn	Asp	Ile		
	130					135					140						
Thr	Glu	Leu	Glu	Glu	Arg	Ile	Asn	Gln	Phe	Val	Thr	Leu	Ser	Gln	Glu		

145 150 155 160
 Lys Gly Arg Asp Ala Thr Leu Asp Lys Thr Met Arg Trp Leu Gly Ile
 165 170 175
 Gln Asn Ile Asn Lys Val Thr Lys Lys Asp Ile Ala Asn Ala His Gln
 180 185 190
 Lys Leu Asp Ala Gly Leu Lys Gln Leu Asp Lys Glu Asn Ser Asn Asp
 195 200 205

<210> 5342

<211> 212

<212> PRT

<213> S.epidermidis

<400> 5342

Ile Ser Leu Glu Leu Gln Leu Ala Ile Asp Leu Leu Asn Lys Glu Glu
 1 5 10 15
 Ala Ala Lys Leu Ala Gln Lys Val Glu Glu Tyr Val Asp Ile Val Glu
 20 25 30
 Ile Gly Thr Pro Ile Val Ile Asn Glu Gly Leu Pro Ala Val Gln His
 35 40 45
 Leu Asn Glu Asn Ile Asn Asn Ala Lys Val Leu Ala Asp Leu Lys Ile
 50 55 60
 Met Asp Ala Ala Asp Tyr Glu Val Ser Gln Ala Val Lys Tyr Gly Ala
 65 70 75 80
 Asp Ile Val Thr Ile Leu Gly Val Ala Glu Asp Ala Ser Ile Lys Ala
 85 90 95
 Ala Val Glu Glu Ala His Lys His Gly Lys Ala Leu Leu Val Asp Met
 100 105 110
 Ile Ala Val Gln Asn Leu Glu Gln Arg Ala Lys Glu Leu Asp Glu Met
 115 120 125
 Gly Ala Asp Tyr Ile Ala Val His Thr Gly Tyr Asp Leu Gln Ala Glu
 130 135 140
 Gly Lys Ser Pro Leu Asp Ser Leu Arg Thr Val Lys Ser Val Ile Lys
 145 150 155 160
 Asn Ser Lys Val Ala Val Ala Gly Gly Ile Lys Pro Asp Thr Ile Lys
 165 170 175
 Asp Ile Val Ala Glu Asp Pro Asp Leu Val Ile Val Gly Gly Gly Ile
 180 185 190
 Ala Asn Ala Asp Asp Pro Val Glu Ala Ala Lys Gln Cys Arg Ala Ala
 195 200 205
 Ile Glu Gly Lys
 210

<210> 5343

<211> 116

<212> PRT

<213> S.epidermidis

<400> 5343

Phe Ile Gln Glu Ile Leu Lys Met Arg Asn Asn Asp Glu Ile Ile Thr
 1 5 10 15
 Ile Ile Lys Ser Ala Met Lys Glu Gln Asp Met Ser Leu Ser Glu Leu
 20 25 30
 Ala Arg Arg Val Gly Val Ala Lys Ser Ala Val Ser Arg Tyr Leu Asn
 35 40 45
 Leu Thr Arg Glu Phe Pro Leu Asn Arg Thr Glu Asp Phe Ala Lys Ala

50		55		60
Leu Ser Ile Ser Thr Glu Tyr Leu Leu Gly Phe Asp Lys Ser Glu Gln				
65		70		75
Gln Asp Glu Gln Pro Lys His Arg Ala Ala His Leu Glu Gly Glu Leu				80
		85		90
Thr Asp Glu Glu Trp Gln Arg Val Leu Asp Tyr Ala Asp Tyr Ile Arg				95
		100		105
Ser Lys Arg Lys				110
		115		

<210> 5344

<211> 167

<212> PRT

<213> S.epidermidis

<400> 5344

Leu Thr Glu Glu Lys Cys Arg Met Lys Lys Val Leu Phe Leu Ile Phe				
1		5		10
Ala Ser Leu Leu Val Leu Gly Ala Cys Gly Gln Asp Glu Asp Lys Asn				15
		20		25
Lys Glu Asp Asp Ala Lys Lys Val Glu Val Lys Lys Thr Lys Glu Asn				30
		35		40
Lys Lys Asp Lys Gln Ser Gln Ser Lys Glu Gln Lys Gln Glu Lys Pro				45
		50		55
Tyr Asn Asn Asp Asp Glu Pro Ile Leu Asn Asp Asn Arg Asn Ala Asn				60
65		70		75
Asp Asn Asn Ser Asn Gln Arg Asn Asn Lys Gln Asn Gln Asn Val Asp				80
		85		90
Lys Ile Asp Asn Asn Ala Tyr Asn Gln Gln Asn Gly Gln Val Asn				95
		100		105
Gln Lys Glu Asn Thr Glu Asn Gly Leu Asp Pro Asn Phe Val Arg His				110
		115		120
Asn Asp Asn Met Val Lys Glu Trp Gln Asn Gln Met Arg Glu His Asn				125
		130		135
Glu Asn Phe Asn Pro Glu Ser Gly Gly Asp Leu Tyr Asn Val Glu Thr				140
145		150		155
Gly Asn Tyr Val Asp Asp Glu				160
		165		

<210> 5345

<211> 437

<212> PRT

<213> S.epidermidis

<400> 5345

Asp Arg Arg Glu Ser Met Thr Leu Ser Ser Tyr Ala Thr Ser Lys Leu				
1		5		10
Thr Glu Glu Lys Val Phe Lys Asp Pro Ile His Arg Phe Ile His Val				15
		20		25
Gln Asp Gln Leu Ile Trp Asp Leu Ile Lys Thr Lys Glu Phe Gln Arg				30
		35		40
Leu Arg Arg Ile Lys Gln Leu Gly Thr Leu Tyr Leu Ser Phe His Thr				45
		50		55
Ala Glu His Ser Arg Phe Gly His Ser Leu Gly Val Tyr Glu Ile Val				60
65		70		75
Arg Arg Met Ile Asp Glu Thr Phe Ile Gly Gln Asp Ala Trp Asp Asn				80

				85				90					95				
Thr	Asp	Arg	Pro	Leu	Ala	Leu	Cys	Ala	Ala	Leu	Leu	His	Asp	Leu	Gly		
			100					105					110				
His	Gly	Pro	Phe	Ser	His	Ser	Phe	Glu	Lys	Ile	Phe	Asn	Thr	Asp	His		
		115					120					125					
Glu	Ala	Phe	Thr	Gln	Ala	Ile	Ile	Thr	Gly	Asp	Thr	Glu	Val	Asn	Gly		
	130					135					140						
Val	Leu	Ser	Arg	Val	Ser	Asp	Asn	Phe	Pro	Lys	Gln	Val	Ala	Asp	Val		
145					150					155					160		
Ile	Asn	Lys	Thr	His	Asp	Asn	Lys	Leu	Val	Ile	Ser	Met	Ile	Ser	Ser		
			165						170					175			
Gln	Ile	Asp	Ala	Asp	Arg	Met	Asp	Tyr	Leu	Gln	Arg	Asp	Ala	Tyr	Phe		
			180					185					190				
Thr	Gly	Val	Thr	Tyr	Gly	Ser	Phe	Asp	Met	Glu	Arg	Ile	Leu	Arg	Leu		
		195					200					205					
Met	Arg	Pro	Ser	Lys	Glu	Glu	Val	Leu	Ile	Lys	Asp	Ser	Gly	Met	His		
	210					215					220						
Ala	Val	Glu	Asn	Phe	Ile	Met	Ser	Arg	Tyr	Gln	Met	Tyr	Trp	Gln	Ile		
225					230					235					240		
Tyr	Phe	His	Pro	Val	Ser	Arg	Gly	Gly	Glu	Val	Leu	Leu	Asn	Asn	Cys		
				245					250					255			
Leu	Lys	Arg	Ala	Lys	Gln	Leu	Tyr	Asn	Glu	Gly	Tyr	Glu	Phe	Lys	Met		
			260					265					270				
Tyr	Pro	Lys	Asp	Phe	Ile	Pro	Phe	Phe	Glu	Gly	Thr	Met	Thr	Ile	Glu		
		275				280						285					
Gln	Tyr	Val	Glu	Leu	Asp	Glu	Ala	Val	Val	Leu	Tyr	Tyr	Leu	Lys	Lys		
	290					295					300						
Trp	Ile	His	Glu	Asn	Asp	Thr	Ile	Leu	Ser	Asp	Leu	Ser	Arg	Arg	Phe		
305				310						315					320		
Ile	Asn	Arg	Asp	Leu	Phe	Lys	Tyr	Ile	Pro	Phe	Asp	Gly	Ser	Ile	Ile		
				325					330					335			
Thr	Ile	Ser	Glu	Leu	Gln	Glu	Leu	Phe	Glu	Ala	Gly	Gly	Ile	Asn	Pro		
			340					345					350				
Asp	Tyr	Tyr	Phe	Val	Ser	Glu	Ala	Phe	Ser	Asp	Leu	Pro	Tyr	Asp	Tyr		
		355					360					365					
Asp	Arg	Pro	Gly	Ser	Asn	Arg	Lys	Pro	Ile	His	Leu	Leu	Lys	Ser	Asn		
		370				375						380					
Gly	Gly	Ile	Thr	Glu	Ile	Ser	Asn	Gln	Ser	Leu	Val	Ile	Asn	Ser	Ile		
385					390					395					400		
Thr	Gly	Ile	Asn	Arg	Glu	Asp	His	Lys	Leu	Tyr	Tyr	Pro	Lys	Glu	Met		
			405					410						415			
Ile	Leu	Lys	Ile	Lys	Asp	Tyr	Gln	Ile	Lys	Gly	Ser	Ile	Ile	Asn	Leu		
			420					425					430				
Leu	Asn	Glu	Leu	Asn													
			435														

<210> 5346

<211> 219

<212> PRT

<213> S.epidermidis

<400> 5346

Thr	Glu	Gly	Glu	Thr	Phe	Val	Leu	Lys	Arg	Met	Arg	Asp	Asp	Ile	Lys		
1				5				10						15			
Met	Val	Phe	Glu	Gln	Asp	Pro	Ala	Ala	Arg	Ser	Thr	Leu	Glu	Val	Ile		
			20					25					30				

195 200 205
 Leu Gly Ala Asp Ala Ile Ile Asn Ser Thr Asn Val Asp Pro Ile Glu
 210 215 220
 Glu Val Asn Arg Leu Thr Asn Asn Lys Gly Leu Asp Ala Thr Val Ile
 225 230 235 240
 Thr Ala Val Ala Lys Thr Pro Phe Asn Gln Ala Val Asp Val Val Lys
 245 250 255
 Ala Gly Ala Arg Val Val Ala Val Gly Leu Pro Val Asp Lys Met Asp
 260 265 270
 Leu Asp Ile Pro Arg Leu Val Leu Asp Gly Ile Glu Val Val Gly Ser
 275 280 285
 Leu Val Gly Thr Arg Gln Asp Leu Arg Glu Ala Phe Gln Phe Ala Ala
 290 295 300
 Glu Asn Lys Val Ile Pro Lys Ile Gln Leu Arg Gln Leu Ser Glu Ile
 305 310 315 320
 Asn Asp Ile Phe Asp Glu Met Glu Lys Gly Thr Ile Thr Gly Arg Met
 325 330 335
 Val Ile Asp Met Lys Ser Thr His
 340

<210> 5348
 <211> 124
 <212> PRT
 <213> S.epidermidis

<400> 5348
 Trp Lys Ser Leu Tyr Arg Lys Val Gly Ser Lys Met Lys Asn Lys Phe
 1 5 10 15
 Leu Ile Cys Asp Glu Cys Gln Ala Val Asn Leu Lys Ser Leu Lys Arg
 20 25 30
 Lys Leu Glu Lys Leu Asp Pro Glu Ala Glu Ile Glu Ile Gly Cys Gln
 35 40 45
 Ser Tyr Cys Gly Pro Gly Arg Arg Lys Thr Phe Ala Phe Val Asn Asn
 50 55 60
 Arg Pro Leu Ala Ala Leu Thr Glu Glu Glu Leu Met Glu Lys Val Thr
 65 70 75 80
 Lys Gln Leu Lys Lys Pro Arg Asp Pro Glu Glu Glu Glu Arg Leu Arg
 85 90 95
 Lys Arg Asn Glu Glu Arg Lys Arg Arg Lys Glu Glu Gln Asp Arg Lys
 100 105 110
 Leu Lys Glu Lys Leu Lys Lys His Lys Ala Glu Lys
 115 120

<210> 5349
 <211> 191
 <212> PRT
 <213> S.epidermidis

<400> 5349
 Asn Ala Thr Leu Thr Phe Val Ala Val Ile Leu Ile Ser Leu Ile Leu
 1 5 10 15
 Asp Glu Ile Gly Phe Phe Glu Trp Ser Ala Ile His Met Val Lys Ala
 20 25 30
 Ser Gln Gly His Gly Leu Lys Met Phe Val Phe Ile Met Ile Leu Gly
 35 40 45
 Ala Ile Ile Ala Ala Phe Phe Ala Asn Asp Gly Ala Thr Leu Ile Leu

50 55 60
 Thr Pro Ile Ala Leu Ala Met Ile Arg Asn Leu Gly Phe Asn Lys Lys
 65 70 75 80
 Leu Val Phe Pro Phe Ile Ile Ala Cys Gly Phe Ile Val Tyr Ser Thr
 85 90 95
 Ser Leu Pro Leu Val Val Ser Asn Leu Val Asn Ile Val Ser Ala Asp
 100 105 110
 Tyr Phe Gly Ile Glu Phe Val Glu Tyr Leu Lys Arg Met Phe Ile Pro
 115 120 125
 Asn Leu Phe Ser Leu Leu Ala Ser Ile Leu Ile Leu Trp Phe Tyr Phe
 130 135 140
 Arg Lys Ser Ile Pro Lys Thr Phe Asp Ile Ser Ser Ile Phe Glu Pro
 145 150 155 160
 Lys Asn Ala Ile Arg Asp Thr Arg Leu Phe Lys Ile Ser Trp Ile Ile
 165 170 175
 Leu Ala Leu Leu Leu Ile Gly Tyr Leu Val Ser Glu Phe Ile Pro
 180 185 190

<210> 5350
 <211> 44
 <212> PRT
 <213> S.epidermidis

<400> 5350
 Ile Gln Leu Cys Asn Arg Thr Ile Phe Asn Met Ile Asn Ile Gly Ile
 1 5 10 15
 Trp Pro Met Val Ile Leu Ala Leu Leu Ile Ile Ala Asn Ser Ile Phe
 20 25 30
 Met Val Tyr Lys Thr Val Asp Val Lys Lys Arg Lys
 35 40

<210> 5351
 <211> 283
 <212> PRT
 <213> S.epidermidis

<400> 5351
 Leu Ser Phe Cys Leu Tyr Ile Leu Ile Trp Met His Asn Phe Ser His
 1 5 10 15
 Glu Gly Cys Ala Phe Phe Leu Ile Gln Ile Lys Ile Ile Gly Gly Ile
 20 25 30
 Lys Met Lys Lys Thr Ala Ile Ile Thr Gly Ser Ser Arg Gly Leu Gly
 35 40 45
 Ala Lys Ile Ala Ile Thr Leu Leu Glu Lys Gly Tyr Asn Val Val Val
 50 55 60
 Asn Tyr Lys Gln Asn Lys Asp Lys Ala Glu Lys Leu Ile Arg Asn Tyr
 65 70 75 80
 Asn Gln Ser Arg Ala Ile Ala Ile Gln Ala Asp Val Thr Asp Arg Asn
 85 90 95
 Asp Val Asn Arg Met Ile Gln Thr Ala Thr Gln His Phe Gly Lys Ile
 100 105 110
 Asp Ile Val Ile Asn Asn Ala Leu Val Gly Phe Lys Phe Asp Pro Asn
 115 120 125
 Gln Gln Lys Ser Phe Lys Asp Leu Thr Trp Glu Asp Tyr Gln Gln Gln
 130 135 140
 Leu Asn Gly Thr Leu Lys Gly Ala Phe Asn Val Thr Gln Ser Val Ile

145 150 155 160
 Pro Gln Phe Ile Glu Gln Gln Ser Gly Cys Ile Val Ser Ile Gly Thr
 165 170 175
 Asn Leu Tyr Gln Asn Pro Val Val Pro Tyr His Glu Tyr Thr Thr Ala
 180 185 190
 Lys Ala Gly Leu Ile Gly Phe Thr Arg Asn Ile Ala Ala Glu Leu Gly
 195 200 205
 Gln Tyr Gly Ile Thr Ala Asn Val Val Ser Gly Gly Leu Leu Lys Thr
 210 215 220
 Thr Asp Ala Ser Ala Val Thr Thr Pro Glu Val Phe Asp Leu Ile Ala
 225 230 235 240
 Gln Thr Thr Pro Leu Arg Lys Val Thr Ser Pro Gln Asp Val Ala Asn
 245 250 255
 Met Val Val Tyr Leu Ala Ser Asp Glu Ala Arg Gly Val Thr Gly Gln
 260 265 270
 Asn Ile Thr Val Asp Gly Gly Leu Thr Met Asn
 275 280

<210> 5352
 <211> 43
 <212> PRT
 <213> S.epidermidis

<400> 5352
 Asn Leu Pro Trp Thr Ile Ser Lys Val Thr Arg Asp Ile Ser His Leu
 1 5 10 15
 Gly Phe Glu Ala Gln Pro Gly Val Gly Leu Cys Ile Gln Phe His Phe
 20 25 30
 Leu Ile Leu Leu Val Tyr Gly Met Tyr Glu Phe
 35 40

<210> 5353
 <211> 40
 <212> PRT
 <213> S.epidermidis

<400> 5353
 Lys Gly Lys Cys Thr Thr Ile Lys Phe Phe Leu Ile Phe Ile Ile Lys
 1 5 10 15
 Phe Thr Tyr Lys Ser Leu Phe Tyr Leu Leu Asn Ser Met Lys Met Thr
 20 25 30
 Leu Asn Asn Lys Leu His Val Met
 35 40

<210> 5354
 <211> 75
 <212> PRT
 <213> S.epidermidis

<400> 5354
 Thr Glu Arg Trp Cys Leu Ile Met Glu Phe Asn Val Lys Val Asn Val
 1 5 10 15
 Asp Ala Asp Glu Ala Ile Glu Lys Leu Glu Arg Ile Lys Lys Leu Tyr
 20 25 30
 Glu Glu Ile Asn Gln Leu Lys Asn Asp Arg Pro Val Val Lys Val Gly
 35 40 45

Ile Ser Asn Glu Ala Asp Val Glu Gln Ile Arg Ser Tyr Ile Asn Glu
 50 55 60
 Lys Asn Val Glu Asn Ala Asn Phe Asn Leu Phe
 65 70 75

<210> 5355
 <211> 168
 <212> PRT
 <213> S.epidermidis

<400> 5355
 Arg Ser Phe Arg His Glu Met Phe Lys Ser Gly Arg Ala Lys Leu Ser
 1 5 10 15
 Pro Val Thr Thr Ser Arg Tyr Gln Gly Val His Ile Val Ala Lys Lys
 20 25 30
 Val Glu Lys Val Val Lys Leu Gln Ile Pro Ala Gly Lys Ala Asn Pro
 35 40 45
 Ala Pro Pro Val Gly Pro Ala Leu Gly Gln Ala Gly Val Asn Ile Met
 50 55 60
 Gly Phe Cys Lys Glu Phe Asn Ala Arg Thr Gln Glu Gln Ala Gly Leu
 65 70 75 80
 Ile Ile Pro Val Glu Ile Ser Val Tyr Glu Asp Arg Ser Phe Thr Phe
 85 90 95
 Ile Thr Lys Thr Pro Pro Ala Pro Val Leu Leu Lys Lys Ala Ala Gly
 100 105 110
 Val Glu Lys Gly Ser Gly Glu Pro Asn Lys Thr Lys Val Ala Thr Val
 115 120 125
 Thr Lys Asp Gln Val Arg Glu Ile Ala Gln Thr Lys Met Gln Asp Leu
 130 135 140
 Asn Ala Ala Asp Glu Glu Ala Ala Met Arg Ile Ile Glu Gly Thr Ala
 145 150 155 160
 Arg Ser Met Gly Ile Thr Val Gln
 165

<210> 5356
 <211> 172
 <212> PRT
 <213> S.epidermidis

<400> 5356
 Glu Val Ser Arg Leu Ser Glu Lys Lys Gly Phe Asn Phe Asn Ile Ile
 1 5 10 15
 Lys Asn Asp Pro Leu Asp Gly His Lys Gly Thr Asn Ile Gly Ser Ile
 20 25 30
 Ser Leu Asp Asn Ile Ala Pro Val Phe Ile Asp Val Glu Asn Gln Lys
 35 40 45
 Ala Phe Val Asp Ile Gly Gly Met His Ala Arg Ala Glu Val Glu Lys
 50 55 60
 Gly Val Lys Trp Ile Thr Asp Lys Ser Gln Val Glu Gly Glu Glu Ala
 65 70 75 80
 Lys Ala Tyr Trp Leu Cys Trp Val Thr Thr Glu Arg Ser Glu Glu Gly
 85 90 95
 Pro Tyr Tyr Ala Gly Val Thr Ala Cys Tyr Leu Leu Val Asn Lys Ser
 100 105 110
 Ile Arg Arg Gly Tyr Lys Ser Met Pro Glu His Val Asn Met Met Asp
 115 120 125

<400> 5359

Lys Ile Ile Phe Tyr Ser His Gln Leu Ser Leu Leu Ile Arg Lys Lys
 1 5 10 15
 Thr Trp Asp Asn His Phe Val Pro Gly Leu Ser Phe Tyr Asp Leu Ser
 20 25 30
 Ile Val Ser His Leu Leu Lys Ile
 35 40

<210> 5360

<211> 901

<212> PRT

<213> S.epidermidis

<400> 5360

Lys Leu Leu Arg Phe Leu Trp Leu Arg Arg Ser Lys Thr Leu Lys Leu
 1 5 10 15
 Asp Asn Leu Ile Thr Lys Leu His Ser Tyr Phe Ser Gln Lys Phe Val
 20 25 30
 Ser Gln Leu Glu Asn Asn Phe Glu Gln Ile Lys Tyr Trp Thr Asn Lys
 35 40 45
 Ser Asp Asp Ser Phe Asn Glu His Leu Thr Thr Gln Lys Asn Ala His
 50 55 60
 Thr Thr Asp Gln Ile Lys His Lys Thr Thr Lys Gly Lys Asp Val Val
 65 70 75 80
 Leu Ser Asn His Glu Asn Tyr Gln Asp Glu Leu Ile Glu His Leu Val
 85 90 95
 Leu Gly His Asn Gly Asp Gly Asn Asn Glu Leu Lys Ala Ser His Thr
 100 105 110
 Ser Met Asp Ala Gln Ser Phe Asp Ser Leu His Gln Arg Leu Tyr His
 115 120 125
 Asp Phe Leu Arg Glu Ser Asn Ala Arg Glu Glu Leu Arg Ala Asp Leu
 130 135 140
 Thr Lys Lys Ile Gln Arg Ile Val Asn Val Asp Asp Phe Gly Gly Asp
 145 150 155 160
 Pro Thr Gly Gln Lys Asp Ser Thr Lys Ala Phe Gln Asp Ala Leu Gly
 165 170 175
 Asn Gly Asn Val Gln Val Thr Met Ser Gly Gly Thr Tyr Leu Thr Thr
 180 185 190
 Gly Ile Lys Met Pro Asn Asn Ser Arg Leu Val Gly Gln Gly Lys Asp
 195 200 205
 Ile Thr Thr Ile Lys Phe Met Asp Glu Thr Pro Ala Glu Asn Ile Gly
 210 215 220
 Ile Thr Asn Leu Lys Met Ser Gly Gly Ala Glu Asn Ile Ser Leu Glu
 225 230 235 240
 Ser Phe Ser Phe Asn Gly Asn Lys Phe Arg Gln Asn Lys Thr Leu Lys
 245 250 255
 Ala Thr Gly Gly Ser Arg Ser Ser Asn Ile Arg Phe Ala Gly Val Thr
 260 265 270
 Asn Gly Tyr Ile Tyr Asn Val Lys Ser Tyr Asp Ala Leu Leu His Cys
 275 280 285
 Ile Asp Val Thr Tyr Ala Asn Asp Asn Tyr Tyr Tyr Glu Gly Asp Gly
 290 295 300
 Asn Arg Val Pro Tyr Ala Leu Glu Ser Lys His Ile His Ile Asp Asn
 305 310 315 320
 Cys Glu Val Tyr Gly Cys Gly Asp Asp Gly Ile Thr Thr His His Ser
 325 330 335

50 55 60
 Tyr Tyr Asp Gly Lys Gln Trp Val Gly Gln Thr Gln Asp Glu Leu Glu
 65 70 75 80
 Lys Met Leu Pro Glu Val Glu Ile Pro Val Asp Asp Lys Asp Ile Ala
 85 90 95
 Ile Ala Lys Leu Thr Ser Leu Val Val Asp Leu Gln Glu Glu Val Met
 100 105 110
 Ser Leu Lys Gln Asn Ile Ala Leu Ile Thr Glu Glu Gln Ala Asn Gln
 115 120 125
 Lys Leu Gly Glu Ala
 130

<210> 5364

<211> 121

<212> PRT

<213> S.epidermidis

<400> 5364

Glu Met Gln Leu Tyr Leu Lys Asp Gly Met Glu Ile Arg Glu Val Gln
 1 5 10 15
 Phe Thr Asn Glu Glu Val Gln Asn Tyr Cys Glu Leu Leu Asn Ile Lys
 20 25 30
 Tyr Asp His Tyr Val Pro Thr Leu Met Cys Ala Lys Leu Trp Pro Gln
 35 40 45
 Phe Glu Leu Phe Gln Ser Phe Ser Lys Lys Pro Ile Ile Leu Lys Glu
 50 55 60
 Thr His Ile Lys Thr Gln His Gln Leu Gln Val Asp Cys Thr Tyr Glu
 65 70 75 80
 Ala Thr Leu His Lys Val Ser Gln Lys Leu Ile Lys Asn Ile Ile Lys
 85 90 95
 Tyr Thr Tyr Gly Leu Glu Ile Asn Lys Asp Lys Lys His Cys Met Tyr
 100 105 110
 Ile Lys Gln Ile Phe Ile Glu Val Arg
 115 120

<210> 5365

<211> 168

<212> PRT

<213> S.epidermidis

<400> 5365

Leu Ser Ile Arg Ser Lys Tyr Leu Asp Leu Lys Ile Ile Ile Arg Phe
 1 5 10 15
 Asn Val Thr Asn Glu Val Thr Leu Arg Trp Val Lys Met Asn Leu Glu
 20 25 30
 Phe Asn Ile Ala Val His Val Leu Cys Phe Leu Ala Gln His Asp Gln
 35 40 45
 Glu Gln Phe Asn Ser Lys Glu Leu Ala Lys Leu Thr Cys Leu Asn Pro
 50 55 60
 Val Gln Leu Arg Arg Val Leu Ala Tyr Leu Thr Glu His Asn Tyr Ile
 65 70 75 80
 Lys Val Gln Arg Gly Lys Ala Gly Gly Tyr Gln Ala Asn Gln His Thr
 85 90 95
 Ala Gln Val Asp Leu Ala Lys Leu Tyr Gln His Phe Val Leu Asp Lys
 100 105 110
 Asn Asn Ser Gln Arg Arg Phe Thr Gly Ala Ser Asp Ser His Cys Gln

```
<210> 5366
<211> 42
<212> PRT
<213> S.epidermidis
```

```
<210> 5367
<211> 362
<212> PRT
<213> S.epidermidis
```

<400> 5367															
Gly 1	Arg	Asp	Arg	Met 5	Ile	Gln	Val	Lys	Ala 10	Pro	Gly	Lys	Leu	Tyr 15	Ile
Ala	Gly	Glu	Tyr 20	Ala	Val	Thr	Glu	Pro 25	Gly	Tyr	Lys	Ser	Ile 30	Leu	Ile
Ala	Val	Asn 35	Arg	Phe	Val	Thr 40	Ala	Thr	Ile	Glu	Ala 45	Ser	Asn	Lys	Val
Glu 50	Gly	Ser	Ile	His	Ser	Lys 55	Thr	Leu	His	Tyr	Glu 60	Pro	Val	Lys	Phe
Asp 65	Arg	Asn	Glu	Asp 70	Arg	Ile	Glu	Ile	Ser	Asp 75	Val	Gln	Ala	Ala	Lys 80
Gln	Leu	Lys	Tyr 85	Val	Val	Thr	Ala	Ile	Glu 90	Val	Phe	Glu	Gln 95	Tyr	Val
Arg	Ser	Cys 100	Asn	Met	Asn	Leu	Lys	His 105	Phe	His	Leu	Thr	Ile 110	Asp	Ser
Asn	Leu	Ala 115	Asp	Asn	Ser	Gly	Gln 120	Lys	Tyr	Gly	Leu	Gly 125	Ser	Ser	Ala
Ala	Val 130	Leu	Val	Ser	Val	Val 135	Lys	Ala	Leu	Asn	Glu 140	Phe	Tyr	Gly	Leu
Glu 145	Leu	Ser	Asn	Leu 150	Tyr	Ile	Tyr	Lys	Leu	Ala 155	Val	Ile	Ala	Asn	Met 160
Lys	Leu	Gln	Ser	Leu 165	Ser	Ser	Cys	Gly	Asp 170	Ile	Ala	Val	Ser	Val	Tyr
Ser	Gly	Trp 180	Leu	Ala	Tyr	Ser	Thr	Phe 185	Asp	His	Asp	Trp	Val 190	Lys	Gln
Gln	Met 195	Glu	Thr	Ser	Val	Asn 200	Asp	Val	Leu	Glu	Lys 205	Asn	Trp	Pro	
Gly	Leu 210	His	Ile	Glu	Pro	Leu 215	Gln	Ala	Pro	Glu	Asn 220	Met	Glu	Val	Leu
Ile	Gly	Trp	Thr	Gly	Ser	Pro	Ala	Ser	Ser	Pro	His	Leu	Val	Ser	Glu

225 230 235 240
 Val Lys Arg Leu Lys Ser Asp Pro Ser Phe Tyr Gly Asp Phe Leu Asp
 245 250 255
 Gln Ser His Ala Cys Val Glu Ser Leu Ile Gln Ala Phe Lys Thr Asn
 260 265 270
 Asn Ile Lys Gly Val Gln Lys Met Ile Arg Ile Asn Arg Arg Ile Ile
 275 280 285
 Gln Ser Met Asp Asn Glu Ala Ser Val Glu Ile Glu Thr Asp Lys Leu
 290 295 300
 Lys Lys Leu Cys Asp Val Gly Glu Lys His Gly Gly Ala Ser Lys Thr
 305 310 315 320
 Ser Gly Ala Gly Gly Asp Cys Gly Ile Thr Ile Ile Asn Lys Val
 325 330 335
 Ile Asp Lys Asn Ile Ile Tyr Asn Glu Trp Gln Met Asn Asp Ile Lys
 340 345 350
 Pro Leu Lys Phe Lys Ile Tyr His Gly Gln
 355 360

<210> 5368

<211> 705

<212> PRT

<213> S.epidermidis

<400> 5368

Tyr Leu Phe Ser Lys Tyr Trp Lys Glu Lys Lys Tyr Met Ala Arg Asp
 1 5 10 15
 Phe Ser Leu Lys Asn Thr Arg Asn Ile Gly Ile Met Ala His Ile Asp
 20 25 30
 Ala Gly Lys Thr Thr Thr Thr Glu Arg Ile Leu Tyr Tyr Thr Gly Arg
 35 40 45
 Ile His Lys Ile Gly Glu Thr His Glu Gly Ala Ser Gln Met Asp Trp
 50 55 60
 Met Glu Gln Glu Gln Asp Arg Gly Ile Thr Ile Thr Ser Ala Ala Thr
 65 70 75 80
 Thr Ala Gln Trp Gln Gly His Arg Val Asn Ile Ile Asp Thr Pro Gly
 85 90 95
 His Val Asp Phe Thr Val Glu Val Glu Arg Ser Leu Arg Val Leu Asp
 100 105 110
 Gly Ala Val Thr Val Leu Asp Ala Gln Ser Gly Val Glu Pro Gln Thr
 115 120 125
 Glu Thr Val Trp Arg Gln Ala Thr Thr Tyr Gly Val Pro Arg Ile Val
 130 135 140
 Phe Val Asn Lys Met Asp Lys Leu Gly Ala Asn Phe Glu Tyr Ser Val
 145 150 155 160
 Ser Thr Leu His Asp Arg Leu Gln Ala Asn Ala Ala Pro Ile Gln Leu
 165 170 175
 Pro Ile Gly Ala Glu Asp Glu Phe Glu Ala Ile Ile Asp Leu Val Glu
 180 185 190
 Met Lys Cys Phe Lys Tyr Thr Asn Asp Leu Gly Thr Glu Ile Asp Glu
 195 200 205
 Ile Glu Ile Pro Glu Asp His Lys Glu Arg Ala Glu Glu Ala Arg Ala
 210 215 220
 Gln Leu Ile Glu Ala Val Ala Glu Asn Asn Asp Asp Leu Met Glu Lys
 225 230 235 240
 Tyr Leu Gly Asp Glu Glu Ile Ser Val Asp Glu Leu Lys Asp Ala Ile
 245 250 255

Arg Gln Ala Thr Thr Asp Val Glu Phe Tyr Pro Val Leu Cys Gly Thr
 260 265 270
 Ala Phe Lys Asn Lys Gly Val Gln Leu Met Leu Asn Ala Val Ile Asp
 275 280 285
 Tyr Leu Pro Ser Pro Leu Asp Val Lys Pro Ile Ile Gly His Arg Ala
 290 295 300
 Asn Asn Pro Asp Glu Glu Val Val Ala Lys Pro Asp Asp Ser Ala Glu
 305 310 315 320
 Phe Ala Ala Leu Ala Phe Lys Val Met Thr Asp Pro Tyr Val Gly Lys
 325 330 335
 Leu Thr Phe Phe Arg Val Tyr Ser Gly Thr Leu Ser Ser Gly Ser Tyr
 340 345 350
 Val Lys Asn Ser Ser Lys Asp Lys Arg Glu Arg Val Gly Arg Leu Leu
 355 360 365
 Gln Met His Ala Asn Ser Arg Gln Glu Ile Asp Thr Val Tyr Ser Gly
 370 375 380
 Glu Ile Ala Ala Ala Val Gly Leu Lys Glu Thr Gly Thr Gly Asp Thr
 385 390 395 400
 Leu Cys Gly Glu Lys Asn Asp Ile Ile Leu Glu Ser Met Glu Phe Pro
 405 410 415
 Glu Pro Val Ile His Leu Ser Val Glu Pro Lys Ser Lys Ala Asp Gln
 420 425 430
 Asp Lys Met Thr Gln Ala Leu Val Lys Leu Gln Glu Glu Asp Pro Thr
 435 440 445
 Phe His Ala His Thr Asp Glu Glu Thr Gly Gln Val Ile Ile Gly Gly
 450 455 460
 Met Gly Glu Leu His Leu Asp Ile Leu Val Asp Arg Met Lys Lys Glu
 465 470 475 480
 Phe Asn Val Glu Cys Asn Val Gly Ala Pro Met Val Ser Tyr Arg Glu
 485 490 495
 Thr Phe Lys Gln Pro Ala Gln Val Gln Gly Lys Phe Ser Arg Gln Ser
 500 505 510
 Gly Gly Arg Gly Gln Tyr Gly Asp Val His Ile Glu Phe Thr Pro Asn
 515 520 525
 Glu Thr Gly Gly Gly Phe Glu Phe Glu Asn Ala Ile Val Gly Gly Val
 530 535 540
 Val Pro Arg Glu Tyr Ile Pro Ser Val Glu Gln Gly Leu Lys Asp Ala
 545 550 555 560
 Met Glu Asn Gly Val Leu Ala Gly Tyr Pro Leu Ile Asp Val Lys Ala
 565 570 575
 Lys Leu Phe Asp Gly Ser Tyr His Asp Val Asp Ser Ser Glu Met Ala
 580 585 590
 Phe Lys Ile Ala Ala Ser Leu Ala Leu Lys Glu Ala Ala Lys Lys Cys
 595 600 605
 Asp Pro Val Ile Leu Glu Pro Met Met Lys Val Thr Ile Glu Met Pro
 610 615 620
 Glu Glu Tyr Met Gly Asp Ile Met Gly Asp Val Thr Ala Arg Arg Gly
 625 630 635 640
 Arg Val Asp Gly Met Glu Pro Arg Gly Asn Ala Gln Val Val Asn Ala
 645 650 655
 Tyr Val Pro Leu Ser Glu Met Phe Gly Tyr Ala Thr Ser Leu Arg Ser
 660 665 670
 Asn Thr Gln Gly Arg Gly Thr Tyr Thr Met Tyr Phe Asp His Tyr Ala
 675 680 685
 Glu Val Pro Lys Ser Ile Ala Glu Glu Ile Ile Lys Lys Asn Lys Gly
 690 695 700

Glu
705

<210> 5369
<211> 90
<212> PRT
<213> S.epidermidis

<400> 5369
Val Ile Tyr Ser Ser Gln Lys Arg Thr Asn Gly Gly Glu Asn Met Val
1 5 10 15
Leu Asn Leu Lys Arg Leu Arg Ala Glu Arg Ile Ala Cys Gly Ile Thr
20 25 30
Gln Asp Glu Met Ala Gln Met Met Gly Trp Lys Thr Arg Thr Pro Tyr
35 40 45
Ala Lys Arg Glu Asn Gly Ile Val Asp Ile Gly Ala Asn Glu Phe Ile
50 55 60
Lys Met Ala Lys Ile Leu Gly Tyr Glu Thr Asn Asn Leu Asp Ile Phe
65 70 75 80
Phe Thr Gln Val Val Pro Lys Lys Glu Gln
85 90

<210> 5370
<211> 81
<212> PRT
<213> S.epidermidis

<400> 5370
Leu Cys Asn Arg Thr Cys Phe Leu Ile Tyr Leu Leu Asn Thr Arg Tyr
1 5 10 15
Phe His Gln Gln Phe Phe Gln Ser Val Ala Phe Ser Asn Asp Val Lys
20 25 30
Leu Leu Met Val Pro Asn Val Gly Ile Thr Cys Tyr Ile Ile Lys Cys
35 40 45
Asn Ile Leu Asn Met Leu Asn Leu Arg Tyr Arg Phe Asn Val Ile Ala
50 55 60
His Lys Thr Ser Ala His Tyr Pro Tyr Phe Lys Arg Tyr Lys Leu Met
65 70 75 80
Lys

<210> 5371
<211> 60
<212> PRT
<213> S.epidermidis

<400> 5371
Gly Val Ser Arg Leu Ile Lys Arg Ile Leu Lys Ile Trp Phe Thr Ile
1 5 10 15
Ala Met Tyr Glu Leu Gly Lys Trp Ile Gly Arg Glu Val Tyr Tyr Lys
20 25 30
Leu Thr Ala Asn Asp Glu Val Glu Val Pro Lys Asp Phe Asp Glu Asn
35 40 45
Asp His Ala His Leu Asn Gly Ile Tyr Gly Gly Tyr
50 55 60

663631-663640

<210> 5372
 <211> 213
 <212> PRT
 <213> S.epidermidis

<400> 5372

```

Arg Leu Ile Arg Ser Gly Gln Met Asp Ile Val Gly Met Gln Phe Asn
1      5      10      15
Tyr Leu Lys Val Leu Glu Phe Tyr Gly Arg Asn Lys His Lys Lys Lys
20      25      30
Leu Tyr Lys Cys Tyr Cys Thr Arg Cys Gly Asn Lys Lys Ile Met Ile
35      40      45
Gly Thr Glu Val Lys Asn Gly Tyr Ser Lys Ser Cys Gly Cys Leu Asn
50      55      60
Lys Val Ser His Ser Lys Lys His Gly Met Thr Gly Thr Leu Ile Tyr
65      70      75      80
Asn Lys Trp Lys Gly Met Lys Gln Arg Cys Tyr Asn Ser Asn Tyr Asp
85      90      95
Phe Tyr Ser Ala Tyr Gly Gly Arg Gly Ile Lys Val Cys Asp Glu Trp
100     105     110
Lys Asp Asp Phe Met Gln Phe Tyr Lys Asp Met Gly Asp Val Pro Phe
115     120     125
Glu Gly Ala Glu Leu Asp Arg Ile Asn Asn Asp Asp Asp Tyr Lys Pro
130     135     140
Ser Asn Cys Arg Trp Val Ser His Glu Glu Asn Ala Asn Asn Arg Arg
145     150     155     160
Lys Tyr His Asn Lys Thr Gly Tyr Thr Gly Val Thr Tyr Lys Pro His
165     170     175
Leu Asn Lys Tyr Gln Ala Gln Leu Tyr Lys Asn Lys Lys Phe Ile Tyr
180     185     190
Leu Gly Val Tyr Glu Thr Ala Glu Ala His Leu Ala Tyr Lys Lys
195     200     205
Ala Lys Asn Glu Tyr
210

```

<210> 5373
 <211> 89
 <212> PRT
 <213> S.epidermidis

<400> 5373

```

Met Lys Arg Ser Gly Gly Asn Gln Met Gly Leu Ile Asp Gly Leu Lys
1      5      10      15
Lys Gln Tyr Thr Leu Tyr Gln Ile Asp Gly Trp Lys Met Cys Ser Val
20      25      30
Thr Pro Leu Gly Glu Asp Thr Phe Lys Leu Gly Asn Tyr Ala Gly Ile
35      40      45
His Phe Arg Asn Thr Phe Ser Gly Thr Val Thr Lys Asp Glu Leu Glu
50      55      60
Lys Leu Lys Arg Lys His Lys Leu Phe Arg Lys Glu Glu Leu Gln Gln
65      70      75      80
Gln Met Thr Ile Asn Glu Leu Leu Phe
85

```

<210> 5374
 <211> 69

705 710 715 720
 Ile Leu Gln Ala Ala Ser Gln Leu Phe Ile Gly Leu Ala Thr Ala Trp
 725 730 735
 Ile Gln Leu Leu Ser Gly Asp Ile Pro Gly Ala Trp Gln Thr Leu Gln
 740 745 750
 Thr Met Thr Gln Asn Val Met Asn Thr Ile Trp Asn Thr Ile Leu Ser
 755 760 765
 Ile Trp Asn Gln Ile Ser Asn Phe Ile Phe Asn Val Leu Asn Arg Ile
 770 775 780
 Leu Gly Thr Asn Ile Thr Ser Trp Asn Gln Ile Trp Ser Ala Ile Ser
 785 790 795 800
 Gly Ala Val Thr Arg Ile Trp Asn Thr Val Ala Ser Trp Phe Ser Arg
 805 810 815
 Val Val Ser Thr Val Ala Gln Lys Met Met Gln Ala Leu Ser Arg Ile
 820 825 830
 Ile Ser Gly Gly Ala Gln Trp Val Ser Ser Ile Ile Ser Ala Met Ser
 835 840 845
 Arg Phe Leu Gln Ala Val Val Ser Gly Phe Phe Arg Val Val Gly Ala
 850 855 860
 Val Gly Asn Gly Met Arg Asn Ala Leu Asn Arg Ala Arg Ser Phe Ile
 865 870 875 880
 Gly His Phe Tyr Gln Val Gly Val Asp Met Ile Ala Gly Met Ile Arg
 885 890 895
 Gly Ile Val Gln Lys Ala Lys Asp Leu Ala Ala Ala Ala Trp Asn Ala
 900 905 910
 Ala Lys Gly Ala Leu Asn Ala Ala Lys Ser Ala Leu Asp Ser His Ser
 915 920 925
 Pro Ser Arg Lys Phe Ile Gln Leu Gly Asn Asp Ser Met Thr Gly Leu
 930 935 940
 Gly Met Gly Ile Ser Glu Tyr Ala Gly Lys Ala Ala Arg Glu Ser Lys
 945 950 955 960
 Leu Ala Ala Leu Lys Val Met Asp Ala Phe Asn Ala Asp Leu Lys Pro
 965 970 975
 Asp Phe Leu Glu Glu Gly Leu Ala Gly Leu Gly Asn Ser Phe Asp Ala
 980 985 990
 His Met Ser Lys Asp Val Arg His Ser Met Gln Glu Asn Asn Lys Pro
 995 1000 1005
 Ile Val Asn Val Thr Val Arg Asn Glu Ser Asp Ile Pro Ala Ile Lys
 1010 1015 1020
 Ser Tyr Ile Glu Asp Ser Asn Ser Lys Asp Ala Ser Phe Gly Leu Phe
 1025 1030 1035 1040

<210> 5378

<211> 501

<212> PRT

<213> S.epidermidis

<400> 5378

Leu Ile Phe Gly Tyr Leu Leu Ser Thr Gln Leu Ile Val Gly Val Lys
 1 5 10 15
 Ile Met Ser Glu Arg Ile Arg Val Arg Tyr Ala Pro Ser Pro Thr Gly
 20 25 30
 Tyr Leu His Ile Gly Asn Ala Arg Thr Ala Leu Phe Asn Tyr Leu Phe
 35 40 45
 Ala Lys His Tyr Asn Gly Asp Phe Val Val Arg Ile Glu Asp Thr Asp
 50 55 60

Ser Lys Arg Asn Leu Glu Asp Gly Glu Ser Ser Gln Phe Asp Asn Leu
 65 70 75 80
 Lys Trp Leu Gly Leu Asp Trp Asp Glu Ser Val Asp Lys Asp Lys Gly
 85 90 95
 Phe Gly Pro Tyr Arg Gln Ser Glu Arg Ala Glu Ile Tyr Asn Pro Leu
 100 105 110
 Ile Gln Gln Leu Leu Glu Glu Asp Lys Ala Tyr Lys Cys Tyr Met Thr
 115 120 125
 Glu Glu Glu Leu Glu Ala Glu Arg Glu Ala Gln Ile Ala Arg Gly Glu
 130 135 140
 Met Pro Arg Tyr Gly Gly Gln His Ala His Leu Thr Glu Glu Gln Arg
 145 150 155 160
 Gln Gln Tyr Glu Ala Glu Gly Arg Lys Pro Ser Ile Arg Phe Arg Val
 165 170 175
 Pro Lys Asp Gln Thr Tyr Thr Phe Asn Asp Met Val Lys Gly Glu Ile
 180 185 190
 Ser Phe Glu Ser Asp Asn Ile Gly Asp Trp Val Ile Val Lys Lys Asp
 195 200 205
 Gly Val Pro Thr Tyr Asn Phe Ala Val Ala Val Asp Asp His Tyr Met
 210 215 220
 Gln Ile Ser Asp Val Ile Arg Gly Asp Asp His Val Ser Asn Thr Pro
 225 230 235 240
 Lys Gln Leu Met Ile Tyr Glu Ala Phe Gly Trp Glu Ala Pro Arg Phe
 245 250 255
 Gly His Met Ser Leu Ile Val Asn Glu Glu Arg Lys Lys Leu Ser Lys
 260 265 270
 Arg Asp Gly Gln Ile Leu Gln Phe Ile Glu Gln Tyr Arg Asp Leu Gly
 275 280 285
 Tyr Leu Pro Glu Ala Leu Phe Asn Phe Ile Thr Leu Leu Gly Trp Ser
 290 295 300
 Pro Glu Gly Glu Glu Glu Ile Phe Ser Lys Glu Glu Phe Ile Lys Ile
 305 310 315 320
 Phe Asp Glu Lys Arg Leu Ser Lys Ser Pro Ala Met Phe Asp Arg Gln
 325 330 335
 Lys Leu Ala Trp Val Asn Asn Gln Tyr Met Lys Thr Lys Asp Thr Glu
 340 345 350
 Thr Val Phe Glu Leu Ala Leu Pro His Leu Ile Lys Ala Asn Leu Ile
 355 360 365
 Pro Glu Asn Pro Ser Glu Lys Asp Arg Glu Trp Gly Arg Lys Leu Ile
 370 375 380
 Ala Leu Tyr Gln Lys Glu Met Ser Tyr Ala Gly Glu Ile Val Pro Leu
 385 390 395 400
 Ser Glu Met Phe Phe His Glu Met Pro Glu Leu Gly Lys Asp Glu Gln
 405 410 415
 Glu Val Leu Gln Gly Glu Gln Val Pro Glu Leu Met Asn His Leu Tyr
 420 425 430
 Gly Lys Leu Glu Ser Leu Glu Ser Phe Glu Ala Thr Glu Ile Lys Lys
 435 440 445
 Met Ile Lys Glu Val Gln Lys Glu Thr Gly Ile Lys Gly Lys Gln Leu
 450 455 460
 Phe Met Pro Ile Arg Val Ala Val Thr Gly Gln Met His Gly Pro Glu
 465 470 475 480
 Leu Pro Asn Thr Ile Glu Val Leu Gly Lys Asp Lys Val Leu Ser Arg
 485 490 495
 Leu Lys Asn Leu Val
 500

<210> 5379
 <211> 46
 <212> PRT
 <213> S.epidermidis

<400> 5379
 Lys Leu Asn Gly Phe Ile Tyr Ser Asn Leu Gln Leu Asn Tyr Val Leu
 1 5 10 15
 Leu Thr Ser Lys Pro Pro Ala Thr Ile Ile His Val Ser Gly Gly Phe
 20 25 30
 Asp Leu Phe Ile Ser Leu Leu Cys Ala Ser Leu Thr Phe Pro
 35 40 45

<210> 5380
 <211> 52
 <212> PRT
 <213> S.epidermidis

<400> 5380
 Phe Arg Gly Gly Gln Thr Met Trp Gly Val Ile Ala Ile Ile Ile Leu
 1 5 10 15
 Val Leu Leu Leu Phe Gly Ser Leu Leu Glu Gln Asn Asp Leu Lys His
 20 25 30
 Gln Leu Glu Val Lys Glu Tyr Glu Ile Lys Thr Leu Lys Asp Lys Leu
 35 40 45
 Glu Asn Gly Gly
 50

<210> 5381
 <211> 128
 <212> PRT
 <213> S.epidermidis

<400> 5381
 Glu Glu Thr Gly Thr Ile Arg Arg Leu Asp Ile Met Ser Met Thr Glu
 1 5 10 15
 Leu Glu Ala Ile Glu Ile Leu Glu Leu Ile Asn Asn Val Tyr Asp Met
 20 25 30
 Lys Phe Asn Glu Ile Lys Tyr Asn Leu Trp Val Glu Gln Leu Thr Gln
 35 40 45
 Tyr Gly Asp Phe Asp Arg Thr Leu His Lys Thr Lys Lys Tyr Val Arg
 50 55 60
 Glu Ser Arg Tyr Lys Pro Thr Ile Ser Gln Ile Ile Asp Arg Lys Pro
 65 70 75 80
 Pro Glu Met Glu Ser Ala Val Ile Pro Glu Glu Gln Thr Asp Lys Tyr
 85 90 95
 Arg Met Gln His Asp Lys Glu Phe Arg Glu Lys Arg Gln Gln Leu Arg
 100 105 110
 Lys Gln Trp Gln Lys Met Lys Glu Asp Trp Gly Leu Asp Glu Tyr
 115 120 125

<210> 5382
 <211> 256
 <212> PRT
 <213> S.epidermidis

<400> 5382

Trp Met Lys Gly Ser Val Asn Val Glu Asp Ile Val Ile Val Gly Arg
 1 5 10 15
 His Ala Val Lys Glu Ala Ile Ile Ser Gly His Ala Ile Asn Lys Ile
 20 25 30
 Leu Ile Gln Asp Gly Ile Lys Lys Gln Gln Ile Asn Asp Ile Leu Lys
 35 40 45
 Asn Ala Lys Ser Gln Lys Leu Ile Val Gln Thr Val Pro Lys Ser Lys
 50 55 60
 Leu Asp Phe Leu Ala Asn Ala Pro His Gln Gly Val Ala Ala Leu Val
 65 70 75 80
 Ala Pro Tyr Glu Tyr Ala Asn Phe Asp Glu Phe Leu Gln Lys Gln Lys
 85 90 95
 Lys Lys Ala Arg Tyr Ser Thr Val Ile Ile Leu Asp Gly Leu Glu Asp
 100 105 110
 Pro His Asn Leu Gly Ser Ile Leu Arg Thr Ala Asp Ala Ser Gly Val
 115 120 125
 Asp Ala Val Ile Ile Pro Lys Arg Arg Ser Val Ala Leu Thr Gln Thr
 130 135 140
 Val Ala Lys Ala Ser Thr Gly Ala Ile Gln His Val Pro Val Ile Arg
 145 150 155 160
 Val Thr Asn Leu Ser Lys Thr Ile Asp Glu Leu Lys Asp Asn Gly Phe
 165 170 175
 Trp Ile Ala Gly Thr Glu Ala Asn Asn Ala Thr Asp Tyr Arg Asp Leu
 180 185 190
 Gln Ala Asp Met Ser Leu Gly Ile Val Ile Gly Ser Glu Gly Gln Gly
 195 200 205
 Met Ser Arg Leu Val Ser Asp Lys Cys Asp Phe His Ile Lys Ile Pro
 210 215 220
 Met Val Gly His Val Asn Ser Leu Asn Ala Ser Val Ala Ala Ser Leu
 225 230 235 240
 Met Met Tyr Glu Val Tyr Arg Lys Arg His Gln Leu Glu Glu Lys Ser
 245 250 255

<210> 5383

<211> 232

<212> PRT

<213> S.epidermidis

<400> 5383

Glu Val Gly Gly Leu Asn Val Ile Tyr Met Tyr Glu Pro Phe Thr His
 1 5 10 15
 Thr Val Thr Lys Thr Asp Leu Ser His Leu His Asn Ile Thr Gly Ile
 20 25 30
 Pro Leu Asn Thr Leu Trp Tyr Gln Lys Glu Arg Gly Thr Tyr Asn Asp
 35 40 45
 Lys Leu Lys Cys Phe Phe Thr Asp Thr Met Pro Arg Val Asn Lys Lys
 50 55 60
 Gln Val Phe Asn Glu Ser Val Val Ala Lys Asp Glu Ile Trp Lys Tyr
 65 70 75 80
 Ser Glu Lys Tyr Asp Leu Tyr Val Ser Asn Leu Gly Arg Met Lys Arg
 85 90 95
 Pro Asp Gly Lys Tyr Lys Phe Ala Asn Gly Cys Asn Gly Ile Ser Thr
 100 105 110
 Val Ile Tyr Lys Asn Lys Lys Tyr Arg Ala Ala Asp Ile Val Tyr Glu

Glu Asp Ile Glu Ser Glu Leu Lys Lys Leu Pro Leu Asp Gln Phe Lys
 35 40 45
 Leu His Phe Gln Lys Arg Val Lys Gln Gly Ile His Ala Met Thr Leu
 50 55 60
 Asn Ile Asp Val Lys Glu Ala Asn His His Arg His Val Asn Asp Ile
 65 70 75 80
 Phe Lys Met Ile Asp Asp Ser Thr Leu Pro Glu Arg Val Lys Tyr Arg
 85 90 95
 Ser Lys Lys Ile Phe Glu Ile Ile Gly Gln Ala Glu Ala Lys Ile His
 100 105 110
 Gly Met Ser Phe Glu Glu Val His Phe His Glu Val Gly Ala Met Asp
 115 120 125
 Ser Ile Ile Asp Ile Ile Gly Gly Cys Ile Ala Leu Glu Gln Leu Gly
 130 135 140
 Ile Asn Thr Leu Tyr Cys Ser Ala Ile Pro Thr Gly His Gly Lys Ile
 145 150 155 160
 Asn Ile Ala His Gly Ile Tyr Pro Ile Pro Ala Pro Ala Thr Ala Glu
 165 170 175
 Ile Leu Lys Gly Ile Pro Ile Ala His Phe Asp Val Gln Ser Glu Leu
 180 185 190
 Thr Thr Pro Thr Gly Ala Ala Phe Ala Lys Gly Leu Val Ser Ser Phe
 195 200 205
 Gly Pro Phe Pro Ser Ala Thr Ile Gln His Ile Gly Tyr Gly Ala Gly
 210 215 220
 Ser Lys Asp Phe Asp Phe Pro Asn Ile Leu Arg Val Ile Gln Phe Glu
 225 230 235 240
 Ser Glu Phe Glu Gln Gln Asp Ser Val Gln Val Ile Glu Cys Gln Ile
 245 250 255
 Asp Asp Met Thr Pro Glu Ala Leu Gly Tyr Phe Met Asn Asn Ala Leu
 260 265 270
 Glu Gln Gly Ala Leu Asp Ala Tyr Tyr Thr Pro Ile Phe Met Lys Lys
 275 280 285
 Ser Arg Pro Ser Thr Gln Leu Thr Leu Ile Cys Lys Leu His Asp Lys
 290 295 300
 Thr Tyr Phe Glu Gln Leu Ile Leu Gln Glu Thr Ser Ser Leu Gly Val
 305 310 315 320
 Arg Ser Thr Ser Val Asn Arg Lys Thr Leu Asn Arg Ala Phe Lys Ile
 325 330 335
 Leu Ser Thr Gln His Gly Thr Val Ser Ile Lys Phe Gly Leu Gln Asn
 340 345 350
 Gly Lys Ile Met Lys Met Lys Pro Glu Tyr Glu Asp Leu Lys Lys Ile
 355 360 365
 Ala Lys Thr Thr Lys Gln Pro Phe Gln Val Ile His Asn Glu Val Leu
 370 375 380
 Gln Gln Leu Tyr Gln Thr Tyr His Ile Gly Asn Ile Leu Gln
 385 390 395

<210> 5387

<211> 499

<212> PRT

<213> S.epidermidis

<400> 5387

Val Leu Phe Met Glu Asn Lys Asn Asn Asn Val Asp Arg Gly Asn Leu
 1 5 10 15
 Lys Gln Asn Leu Ser Glu Lys Phe Val Trp Ala Ile Ala Tyr Gly Ser

225					230				235				240				
Ser	Cys	Lys	Lys	Asn	Asp	Gly	Ala	Val	Leu	Leu	Ile	Val	Met	Glu	Glu		
				245					250					255			
Asn	Arg	Ala	Arg	Gln	Leu	Gly	Phe	Thr	Glu	Gly	Ile	Lys	Phe	Val	Asn		
				260					265					270			
Ser	Ala	Thr	Val	Gly	Val	Gln	Pro	Gln	Tyr	Leu	Gly	Val	Gly	Pro	Val		
				275					280					285			
Pro	Ala	Val	Asn	Gln	Leu	Leu	Ala	Gln	Glu	Arg	Leu	Thr	Ile	Asn	Asp		
				290					295					300			
Ile	Asn	Ala	Val	Glu	Leu	Asn	Glu	Ala	Phe	Ser	Ser	Gln	Val	Ile	Ala		
305					310					315					320		
Ser	Gln	Gln	Gln	Leu	Asn	Ile	Pro	Leu	Asn	Lys	Leu	Asn	Cys	Trp	Gly		
				325					330					335			
Gly	Ala	Ile	Ala	Thr	Gly	His	Pro	Tyr	Gly	Ala	Ser	Gly	Ala	Ala	Leu		
				340					345					350			
Val	Thr	Arg	Leu	Phe	Tyr	Met	Lys	His	Gln	Phe	Arg	Thr	Ile	Ala	Thr		
				355					360					365			
Met	Gly	Ile	Gly	Gly	Gly	Ile	Gly	Asn	Ala	Ala	Leu	Phe	Glu	Arg	Trp		
				370					375					380			
Tyr	Gly	Asn															
385																	

```
<210> 5390
<211> 414
<212> PRT
<213> S.epidermidis
```

<400> 5390																
Tyr	Arg	Ile	Leu	Leu	Thr	Tyr	Val	Arg	Lys	Tyr	Arg	His	Ser	Ile	Asn	
1			5						10					15		
Ile	Gly	Cys	Ile	Pro	Thr	Lys	Thr	Leu	Ile	His	Asp	Gly	Ile	Glu	Gly	
			20					25					30			
Ser	Ser	Phe	Lys	Glu	Ala	Ile	Thr	Arg	Lys	Lys	Glu	Val	Val	Gln	Ala	
		35					40				45					
Leu	Asn	Asn	Lys	Asn	Tyr	Gln	Gly	Leu	Asn	Ser	Lys	Asp	Asn	Ile	Asp	
	50					55					60					
Val	Leu	Asn	Tyr	Lys	Ala	Asn	Phe	Ile	Ser	Asn	Glu	Val	Ile	Glu	Leu	
65					70					75					80	
Gln	Asp	Asn	Asn	Gly	Thr	Ile	Gln	Glu	Thr	Ile	Thr	Ala	Asp	Lys	Ile	
				85					90					95		
Val	Ile	Asn	Thr	Gly	Ser	Arg	Ala	Asn	Ile	Pro	Asp	Ile	Lys	Gly	Ile	
			100					105					110			
Asp	Thr	Ala	Gln	Asn	Ile	Tyr	Asp	Ser	Thr	Gly	Leu	Leu	Asn	Ile	Asp	
		115					120					125				
Tyr	Gln	Pro	Gln	Glu	Leu	Val	Ile	Ile	Gly	Gly	Gly	Tyr	Ile	Ala	Leu	
		130				135					140					
Glu	Phe	Ala	Ser	Met	Phe	Ala	Asn	Phe	Gly	Thr	His	Val	Thr	Ile	Leu	
145					150					155					160	
Glu	Arg	Gly	Asp	Ala	Ile	Met	Thr	Asn	Glu	Asp	Gln	Asp	Ile	Ala	Asn	
				165					170					175		
Leu	Ile	Val	Lys	Asp	Leu	Gln	Asp	Lys	Gly	Val	Thr	Ile	Asn	Thr	Asn	
			180					185					190			
Thr	Ser	Thr	Ile	Ala	Phe	Ser	Asn	Asn	Lys	Asp	Gln	Thr	Ile	Ile	His	
		195					200					205				
Thr	Asn	His	Gly	Glu	Ile	Ser	Ala	Asp	Thr	Val	Leu	Leu	Ala	Thr	Gly	
		210				215					220					

Gly Arg Thr Val Gly Ser Gly Val Val Thr Glu Ile Phe Glu
405 410

<210> 5399

<211> 44

<212> PRT

<213> S.epidermidis

<400> 5399

Tyr Leu Ile Ile Arg Asn Gln Ser Ile Glu Trp Ser Ala Gly Glu Gly
1 5 10 15
Phe Thr Cys Ile Arg Thr Thr Asn Asp Gln Arg Ser Lys Tyr Arg Val
20 25 30
Glu Arg Arg Arg Arg Ile His Leu His Lys Asn His
35 40

<210> 5400

<211> 158

<212> PRT

<213> S.epidermidis

<400> 5400

Val Lys Pro Met Lys Lys Ala Leu Ser Lys Lys Ala Glu Leu Asp Gln
1 5 10 15
Lys Leu Pro Ile Glu Asp Ala Leu Lys Gln Leu Ser Phe Phe Val Gln
20 25 30
Gln Asp Cys Ser Asp Trp Glu Leu Asp Glu Pro Val Pro Pro Leu Pro
35 40 45
Pro Ala Lys Asn Phe Lys Gly Pro Ile Gly Arg Tyr Glu Thr Val Leu
50 55 60
Ala Ile Ile Lys Asp Lys Gln Pro Thr Val Arg Glu Leu Leu Gly Tyr
65 70 75 80
Leu Ser Ala Gly Gly Gly His Leu Thr Leu Ile Gly Thr Pro Glu Glu
85 90 95
Ile Val Asp Glu Met Glu Gln Trp Phe Asn Glu Gly Val Ala Asp Gly
100 105 110
Phe Asn Leu Met Pro Pro Ser Leu Pro His Ser Leu Glu Asp Phe Leu
115 120 125
Lys Tyr Ile Ile Pro Glu Leu Gln Arg Arg Ala Leu Phe Lys Asn Ser
130 135 140
Tyr Asn Gln Ser Thr Leu Arg Thr Leu Leu Asn Leu Asp Ser
145 150 155

<210> 5401

<211> 229

<212> PRT

<213> S.epidermidis

<400> 5401

Lys Gly Val Phe Cys Met Asn Tyr Phe Arg Tyr Lys Gln Phe Asn Lys
1 5 10 15
Asp Val Ile Thr Val Ala Val Gly Tyr Tyr Leu Arg Tyr Ala Leu Ser
20 25 30
Tyr Arg Asp Ile Ser Glu Ile Leu Arg Glu Arg Gly Val Asn Val His
35 40 45
His Ser Thr Val Tyr Arg Trp Val Gln Glu Tyr Ala Pro Ile Leu Tyr

50 55 60
 Gln Ile Trp Lys Lys Lys His Lys Lys Ala Tyr Asp Lys Trp Arg Ile
 65 70 75 80
 Asp Glu Thr Tyr Ile Asn Ile Lys Gly Lys Trp Asn Tyr Leu Tyr Arg
 85 90 95
 Ala Ile Asp Ala Glu Gly His Thr Leu Asp Ile Trp Leu Arg Lys Gln
 100 105 110
 Arg Asp Asn His Ser Ala Tyr Val Phe Ile Lys Arg Leu Ile Lys Gln
 115 120 125
 Phe Gly Lys Ser Gln Lys Val Ile Thr Asp Gln Ala Pro Ser Thr Lys
 130 135 140
 Val Ala Met Ala Lys Val Ile Lys Ala Phe Lys Leu Lys Pro Asp Cys
 145 150 155 160
 His Cys Thr Ser Lys Tyr Leu Asn Asn Leu Ile Glu Gln Asp His Arg
 165 170 175
 His Ile Lys Val Arg Lys Thr Arg Tyr Gln Ser Ile Asn Thr Ala Lys
 180 185 190
 Asn Thr Leu Lys Gly Ile Glu Cys Ile Tyr Ala Leu Tyr Lys Lys Asn
 195 200 205
 Arg Arg Ser Leu Gln Ile Tyr Gly Phe Ser Pro Cys His Glu Ile Ser
 210 215 220
 Ile Met Leu Ala Ser
 225

<210> 5402

<211> 178

<212> PRT

<213> S.epidermidis

<400> 5402

Pro Leu Ile Ile Glu Gly Trp Phe Leu Met Leu Ile Asn Val Leu Asn
 1 5 10 15
 Leu Asn Asp Ser Gln Asp Gly Asn Arg Ile Lys Gln Gly Asp Leu Ser
 20 25 30
 His Met Arg Tyr Ile Leu Ser Asp Asn Asn Asn Glu Asp Leu Lys Leu
 35 40 45
 Glu Gly Leu Pro Ala Lys Val Phe Leu Thr Asp Ser Thr Gly Val Lys
 50 55 60
 Tyr Ile Tyr Asp Thr Thr Val Arg Gln Tyr Asp Asn Ala Tyr Val Cys
 65 70 75 80
 Asp Val Val Ile Asn Gln Ile Ile Pro Ala Asn Thr Tyr Ser Leu Glu
 85 90 95
 Ile Trp Val Asp Asn Lys Tyr Val Phe Pro Ser Asp Asn Lys Ala Lys
 100 105 110
 Ile Gln Val Thr Glu Ser Val Ile Gly Arg Gln Leu Ile Asn Thr Gln
 115 120 125
 Asn His Asp Leu Trp Gln Glu Met Ile Glu Tyr Gly Val Lys Asn Gly
 130 135 140
 Leu Ile Lys Asn Gln Thr Glu Ser Glu Glu Asn Phe Val Ile Gly Glu
 145 150 155 160
 Asn Ala Pro Asn Asp Thr Thr Lys Ile Trp Ile Asp Thr Thr Gly Gly
 165 170 175
 Asn Glu

<210> 5403

<211> 122
 <212> PRT
 <213> S.epidermidis

<400> 5403

Val	Arg	Ile	Met	Asn	Lys	Glu	Gln	Ile	Leu	Gln	Leu	Ile	Glu	Gln	Glu
1			5						10				15		
Leu	Ile	Gln	Ala	Asp	Glu	Ala	Gln	Thr	Asp	Thr	Glu	Phe	Glu	Lys	His
		20					25					30			
Met	Tyr	Ala	Ile	His	Met	Leu	Thr	Ser	Leu	Val	Ser	Ser	His	Gln	Ser
	35						40				45				
Arg	Ser	Thr	Ile	Glu	Lys	Leu	Asn	His	Ser	Lys	Pro	Met	Asn	Ser	Asn
	50					55					60				
Ile	Lys	Asp	Asp	Tyr	Glu	Met	Lys	Gln	Gln	Ser	Ser	Gln	Lys	His	His
65					70					75					80
Val	Thr	Ala	Ala	Glu	Ile	Glu	Ala	Met	Gly	Gly	Lys	Val	Pro	Gln	Ser
			85						90					95	
Met	Lys	Lys	His	His	Thr	Ser	Asn	Asn	Met	Met	Ile	Thr	Asp	Asp	Gln
			100				105						110		
Val	Gly	Asn	Gly	Glu	Ser	Ile	Phe	Asp	Phe						
		115					120								

<210> 5404
 <211> 236
 <212> PRT
 <213> S.epidermidis

<400> 5404

Ala	His	Val	Ile	Met	Ile	Phe	Phe	His	Met	Cys	Trp	Asn	Thr	Ser	Leu
1				5					10					15	
Met	Val	Gln	Tyr	Ser	Leu	Ser	Ile	Leu	Thr	Phe	Gly	Glu	Val	Ile	Met
		20					25					30			
Asn	Lys	Pro	Phe	Ile	Ala	Ile	Glu	Gly	Pro	Ile	Gly	Val	Gly	Lys	Ser
	35						40				45				
Ser	Leu	Ala	His	Arg	Leu	Ser	Lys	Thr	Phe	Gly	Phe	Tyr	Glu	Glu	Lys
	50					55				60					
Glu	Ile	Val	Asp	Glu	Asn	Pro	Phe	Leu	Ser	Asp	Phe	Tyr	Asp	Asp	Ile
65					70					75					80
Glu	Lys	Trp	Ser	Phe	Gln	Thr	Glu	Met	Phe	Phe	Leu	Cys	Asn	Arg	Tyr
			85					90					95		
Lys	Gln	Ile	Arg	Asp	Ile	Glu	Ser	Leu	Asn	Gln	Gly	Ile	Val	Ser	Asp
			100				105						110		
Tyr	His	Ile	His	Lys	Asn	Lys	Ile	Phe	Ala	Lys	Asn	Thr	Leu	Asp	Ala
	115						120					125			
Lys	Glu	Phe	Asp	Lys	Phe	Ser	Arg	Ile	Phe	Asp	Ile	Leu	Thr	Glu	Asp
	130					135					140				
Ile	Glu	Met	Pro	Asn	Thr	Ile	Ile	Phe	Leu	Asp	Ala	Asp	Leu	Asp	Val
145				150					155						160
Leu	Lys	Ser	Arg	Ile	Ala	Gln	Arg	Asn	Arg	Ser	Phe	Glu	Ser	Gln	Ile
			165					170						175	
Glu	Asp	Asp	Tyr	Leu	Leu	Thr	Leu	Lys	Lys	Asp	Tyr	Leu	Ala	Tyr	Tyr
		180					185						190		
Glu	Ser	Leu	Lys	Asn	Asp	Gly	Ala	Asn	Val	Ile	Arg	Ile	Asp	Thr	Ser
	195					200						205			
Gln	Gln	Asp	Phe	Val	Lys	Asn	Asp	Tyr	Asp	Tyr	Gln	Asn	Ile	Leu	Asn
	210					215					220				

Leu Val Lys Pro Met Ile Gly Glu Asn Lys Asp Glu
 225 230 235

<210> 5405
 <211> 202
 <212> PRT
 <213> S.epidermidis

<400> 5405
 Gly Val Val Ile Met Lys Arg Glu Phe Leu Arg Gly Leu Gly Val Glu
 1 5 10 15
 Glu Asp Ala Ile Gln Lys Ile Ile Asp Glu His His Glu Gly Leu Gln
 20 25 30
 Ser Tyr Lys Glu Lys Val Glu Lys Val Asp Ser Leu Lys Glu Gln Leu
 35 40 45
 Glu Thr Ala Asn Glu Glu Ile Lys Asn Arg Asp Asn Gln Ile Glu Glu
 50 55 60
 Leu Lys Asn Asn Val Gly Asp Asn Asp Glu Leu Lys Gln Glu Leu Glu
 65 70 75 80
 Lys Tyr Lys Glu Gln Asn Ala Asn Tyr Asp Gln Lys Leu Lys Asp Val
 85 90 95
 Gln Leu Asn Lys Ala Ile Glu Val Ser Leu Ala Lys Glu Lys Ala Ile
 100 105 110
 Lys Pro Glu Gln Val Ile Lys Leu Ile Asp Lys Asp Asn Leu Glu Val
 115 120 125
 Asp Asp Asn Gly Asn Val Lys Gly Leu Asp Asp Tyr Met Ser Glu Phe
 130 135 140
 Lys Lys Glu Asn Glu His Leu Phe Glu Gln Ser Lys Pro Ser Gly Arg
 145 150 155 160
 Thr Pro Asp Asp Gly Lys Asn Val Asn Gly Gly Ile Thr Gln Glu Glu
 165 170 175
 Phe Asn Asn Met Ser Val Ala Glu Arg Thr Asn Leu Phe Val Asn Asp
 180 185 190
 Arg Lys Thr Tyr Asp Thr Leu Ile Asn Asn
 195 200

<210> 5406
 <211> 228
 <212> PRT
 <213> S.epidermidis

<400> 5406
 Met Val Val Ile Lys Asn Tyr Ile Thr Glu Asp Asp Gly Thr Thr Thr
 1 5 10 15
 Val Val Ile Lys Gly Val Glu Leu Asp Asn Lys Thr Ser Leu Leu Leu
 20 25 30
 Asp Asn Gly Tyr Glu Val Glu Val Asp Val Arg Val Val Asp Pro Phe
 35 40 45
 Lys Ile Thr Asp Lys Gln Arg Lys Val Phe Ala Leu Cys Asn Asp
 50 55 60
 Ile Glu Cys Ala Thr Gly Gln Pro Arg Asp Tyr Met Arg Tyr Met Phe
 65 70 75 80
 Met Asp Tyr Val Glu Val Leu Tyr Gly Tyr Glu Lys Arg Leu Ser Leu
 85 90 95
 Ser Asn Cys Thr Arg Glu Gln Ala Ser Gln Ile Ile Glu Val Ile Ile
 100 105 110

Phe	Asp	Ser	Asp	Ile	Thr	Met	Asn	Gly	Leu	Lys	Ser	Leu	Asp	Thr	Asn
50						55					60				
Asp	Lys	Ile	Ser	Lys	Glu	Phe	His	Gln	Asp	Ser	Glu	Lys	Ala	Ser	Met
65					70					75					80
Lys	Ile	Val	Phe	His	Ser	Asn	Lys	Asn	Asp	Gly	Leu	Asn	Asn	Lys	Asp
				85					90					95	
Thr	Lys	Lys	Asp	Ile	Glu	Asp	Ala	Leu	Asp	Asn	Ile	Arg	Gln	Asn	Asp
			100					105					110		
Asp	Tyr	Ile	Gln	Asn	Ile	Ser	Asn	Pro	Tyr	Asp	Ser	Gly	Gln	Val	Asn
	115						120					125			
Asp	Glu	Gly	Asp	Thr	Ala	Ile	Ala	Asn	Val	Ser	Tyr	Val	Val	Pro	Gln
130						135					140				
Thr	Gly	Leu	Lys	Asp	Ser	Ser	Lys	His	Ile	Ile	Asp	Lys	Glu	Leu	Lys
145					150					155					160
Asp	Val	Thr	Asp	Asn	His	Asn	Val	Gln	Ile	Glu	Lys	Thr	Gln	Gly	Gly
			165						170					175	
Ala	Met	Asn	Ser	Glu	Pro	Gly	Gly	Thr	Ser	Glu	Ile	Val	Gly	Ile	Ile
			180					185					190		
Val	Ala	Phe	Val	Ile	Leu	Leu	Ile	Thr	Phe	Gly	Ser	Leu	Ile	Ala	Ala
	195						200					205			
Gly	Met	Pro	Ile	Ile	Ser	Ala	Ile	Ile	Gly	Leu	Gly	Ser	Ser	Val	Gly
210						215					220				
Ile	Ile	Ala	Leu	Leu	Thr	Tyr	Ile	Phe	Asp	Ile	Pro	Asn	Phe	Thr	Leu
225					230					235					240
Thr	Leu	Ala	Val	Met	Ile	Gly	Leu	Ala	Val	Gly	Ile	Asp	Tyr	Ser	Leu
			245						250					255	
Phe	Ile	Leu	Phe	Arg	Phe	Lys	Glu	Leu	Lys	Lys	Lys	Gly	Val	Asp	Thr
		260					265						270		
Val	Glu	Ala	Ile	Ala	Thr	Ala	Val	Gly	Thr	Ala	Gly	Ser	Ala	Val	Ile
	275						280					285			
Phe	Ala	Gly	Leu	Thr	Val	Met	Ile	Ala	Val	Cys	Gly	Leu	Ser	Leu	Val
290						295					300				
Gly	Ile	Asp	Phe	Leu	Ala	Val	Met	Gly	Phe	Ala	Ser	Ala	Ile	Ser	Val
305					310					315					320
Leu	Phe	Ala	Val	Leu	Ala	Ala	Leu	Thr	Leu	Leu	Pro	Ala	Leu	Ile	Ser
			325						330					335	
Ile	Phe	His	Lys	Ser	Ile	Lys	Ile	Lys	Asp	Lys	Pro	Thr	Lys	Ser	Lys
		340						345					350		
Asp	Pro	Lys	Asp	His	Ser	Trp	Ala	Lys	Phe	Ile	Val	Gly	Lys	Pro	Val
	355						360					365			
Ile	Ala	Val	Ile	Val	Ser	Leu	Ile	Ile	Leu	Ile	Leu	Ala	Ala	Ile	Pro
370						375					380				
Val	Ser	Gly	Met	Arg	Leu	Gly	Ile	Pro	Asp	Asp	Ser	Leu	Lys	Pro	Thr
385					390					395					400
Asp	Ser	Ser	Glu	Tyr	Lys	Ala	Tyr	Lys	Leu	Ile	Ser	Asp	Asn	Phe	Gly
			405						410					415	
Glu	Gly	Tyr	Asn	Gly	Gln	Ile	Val	Met	Leu	Val	Asn	Thr	Lys	Asp	Gly
		420						425					430		
Gly	Ser	Lys	Ser	Thr	Ile	Glu	Arg	Asp	Leu	Asn	Asn	Met	Arg	Ser	Asp
	435						440					445			
Leu	Glu	Asp	Ile	Asp	Asn	Val	Asp	Thr	Val	Ser	Lys	Ala	Gln	Leu	Thr
450						455					460				
Asp	Asn	Asn	Asn	Tyr	Ala	Leu	Phe	Thr	Ile	Ile	Pro	Glu	Lys	Gly	Pro
465					470					475					480
Asn	Ser	Gln	Ser	Thr	Glu	Asn	Leu	Val	Tyr	Asp	Leu	Arg	Asp	Tyr	His
			485						490					495	

<213> S.epidermidis

<400> 5411

Val	Glu	Glu	Ile	Arg	Pro	Ile	Thr	Tyr	Gln	Asp	Lys	Glu	Ala	Tyr	Tyr
1				5					10					15	
Tyr	Tyr	Ile	Gln	Glu	Trp	Tyr	Glu	Asn	Glu	Glu	Lys	Val	Val	Pro	Gly
		20					25						30		
Asn	Thr	Asp	Ile	Ala	Asn	Tyr	Ser	Ser	Phe	Asn	Asn	Met	Val	Asp	Arg
		35				40						45			
Leu	Asn	Cys	Ser	Glu	Val	Asp	Glu	Gly	Phe	Val	Pro	Thr	Thr	Thr	Leu
	50					55					60				
Phe	Tyr	Phe	Lys	Asp	Ser	Ile	Ile	Ile	Gly	Ala	Val	Asp	Ile	Arg	His
65					70				75					80	
Gln	Leu	Asn	Asp	Lys	Leu	Ser	Asn	Ile	Gly	Gly	His	Val	Gly	Tyr	Gly
				85					90					95	
Val	Ala	Lys	Ser	Tyr	Arg	Gly	Lys	Gly	Tyr	Ala	Thr	Ile	Leu	Leu	Glu
			100					105					110		
Lys	Ala	Leu	Asp	Glu	Leu	Lys	Thr	Leu	Asn	Val	Glu	Val	Val	Leu	Met
		115					120					125			
Thr	Cys	Asn	Pro	Leu	Asn	Phe	Ala	Ser	Gln	Thr	Val	Met	Lys	Lys	Cys
	130					135					140				
Gly	Gly	Tyr	Gln	Ile	Glu	Ser	Tyr	Ile	Lys	Lys	Asn	Gly	Lys	Pro	Val
145					150					155					160
His	Arg	Tyr	His	Ile	Pro	Asn	Thr	Lys							
				165											

<210> 5412

<211> 355

<212> PRT

<213> S.epidermidis

<400> 5412

Lys	Leu	Arg	Ile	Gln	Leu	Leu	Leu	Glu	Leu	Leu	Ile	Met	Ile	Asn	Gln
1				5					10					15	
Val	Tyr	Gln	Leu	Val	Ser	Pro	Arg	Gln	Phe	Glu	Ala	Thr	Phe	Lys	Thr
		20						25					30		
Ile	Asp	Leu	His	Asn	His	Asn	Ser	Lys	Val	Ile	Val	Arg	Pro	Leu	Tyr
	35					40						45			
Leu	Ser	Ile	Cys	Ala	Ala	Asp	Leu	Arg	Tyr	Tyr	Cys	Gly	Asn	Arg	Asp
	50					55					60				
Ser	Lys	Ile	Leu	Ser	Lys	Lys	Leu	Pro	Met	Ser	Leu	Ile	His	Glu	Ser
65					70					75				80	
Val	Gly	Glu	Ile	Val	Tyr	Asp	Ser	Glu	His	Arg	Leu	Lys	Asn	Gly	Thr
			85					90						95	
Lys	Val	Val	Met	Ile	Pro	Asn	Thr	Pro	Ser	Lys	Ser	His	Asn	Ile	Ile
		100						105					110		
Ala	Glu	Asn	Tyr	Leu	Thr	Ser	Ser	His	Phe	Lys	Ser	Ser	Gly	Tyr	Asp
		115					120					125			
Gly	Phe	Met	Gln	Asp	Tyr	Ile	Val	Met	Lys	Pro	Asp	Arg	Val	Val	Thr
	130					135					140				
Leu	Pro	Gln	Glu	Ile	Asp	Leu	Ser	Val	Ala	Ser	Tyr	Thr	Glu	Leu	Val
145					150					155					160
Thr	Val	Ser	Val	His	Ala	Ile	Asp	Arg	Phe	Gln	Ser	Lys	Ala	Ile	Pro
				165					170					175	
Gln	Phe	Glu	Ser	Leu	Gly	Ile	Trp	Gly	Asp	Gly	Asn	Leu	Gly	Tyr	Ile
			180					185					190		

Thr Ala Val Leu Leu Lys Lys Leu Tyr Pro Thr Thr Lys Ile Ile Val
 195 200 205
 Phe Gly Lys Thr Leu Tyr Lys Leu Ser Arg Phe Ser Phe Val Asp Glu
 210 215 220
 Ile Ile Gln Ile Asp Asn Ile Pro Gln His Ile Lys Ile Asp His Ala
 225 230 235 240
 Phe Glu Cys Val Gly Gly Lys Gly Ser Gln Gln Ala Ile Glu Gln Ile
 245 250 255
 Ile Asn Ile Ile Asn Pro Glu Gly Ser Ile Ala Leu Leu Gly Val Ser
 260 265 270
 Glu Leu Pro Ile Gln Val Asn Thr Arg Met Val Leu Glu Lys Gly Leu
 275 280 285
 Thr Ile Ile Gly Ser Ser Arg Ser Gly Leu Lys Asp Phe Glu Lys Thr
 290 295 300
 Ile Glu Leu Tyr Arg Lys Tyr Pro Glu Val Leu Asn Gln Leu Ala Leu
 305 310 315 320
 Leu Lys Gly Lys Glu Phe Glu Ile Asn Thr Ile Glu Asp Leu Ile Thr
 325 330 335
 Ala Phe Glu Tyr Asp Ile Ser Asn Ala Trp Gly Lys Thr Val Leu Lys
 340 345 350
 Trp Asn Ile
 355

<210> 5413
 <211> 147
 <212> PRT
 <213> S.epidermidis

<400> 5413
 Ile Arg Arg Ile Arg Met Thr Asn Leu Thr Ile Leu Thr Gly Arg Ile
 1 5 10 15
 Thr Lys Asp Leu Glu Leu Lys Gln Ala Gly Gln Thr Gln Val Thr Asn
 20 25 30
 Phe Ser Met Ala Val Asp Asn Pro Phe Lys Lys Asp Asp Thr Ser Phe
 35 40 45
 Phe Asp Ile Val Ala Phe Gly Lys Thr Ala Gln Leu Leu Asn Asp Tyr
 50 55 60
 Cys Gly Lys Gly Ser Lys Val Leu Ile Glu Gly Asn Leu Lys Gln Asp
 65 70 75 80
 Arg Phe Gln Asp Lys Glu Gly His Asn Arg Ser Val Val Arg Val Ile
 85 90 95
 Ala Asn Arg Ile Glu Phe Leu Asp Ser Lys Gly Ser Asn Gln Gln Asn
 100 105 110
 Asn Gln Pro Gln Lys Gln Gln Glu Gln Thr Thr Glu Thr Lys Ser Lys
 115 120 125
 Asn Pro Phe Ala Asn Ala Ser Gly Pro Ile Asp Ile Thr Asp Asp Met
 130 135 140
 Leu Pro Phe
 145

<210> 5414
 <211> 247
 <212> PRT
 <213> S.epidermidis

<400> 5414

Arg Cys Leu Ile Leu Lys Ile Ile Asn Leu Asp Ser Lys Asn Leu Ala
 1 5 10 15
 Ser Phe Tyr Val Ala Cys Glu Leu Phe Lys Gln Ile Gln Gln His Pro
 20 25 30
 His Ala Lys Leu Gly Leu Ala Thr Gly Gly Thr Met Thr Asp Val Tyr
 35 40 45
 His Tyr Leu Val Asn Leu Leu Ile Lys Asn Lys Val Asp Val Ser Gln
 50 55 60
 Val Glu Thr Phe Asn Leu Asp Glu Tyr Val Gly Leu Lys Ala Ser His
 65 70 75 80
 Gln Gln Ser Tyr His Thr Tyr Met Asn Lys Val Leu Phe Glu Gln Tyr
 85 90 95
 Pro His Phe Val Lys Asn His Ile His Ile Pro Asp Gly Leu Ser Glu
 100 105 110
 Asn Leu Glu Ala Glu Ala Glu Arg Tyr Asn Asn Leu Leu Asp Glu Arg
 115 120 125
 Gly Pro Ile Asp Ile Gln Ile Leu Gly Ile Gly Glu Asn Gly His Ile
 130 135 140
 Gly Phe Asn Glu Pro Gly Thr Asp Phe Asn Ser Glu Thr His Val Val
 145 150 155 160
 Asn Leu Thr Glu Ser Thr Ile Lys Ala Asn Ser Arg Phe Phe Asp Asn
 165 170 175
 Glu Lys Asp Val Pro Arg Gln Ala Val Ser Met Gly Val Lys Ser Ile
 180 185 190
 Leu Lys Ala Lys Arg Ile Ile Leu Leu Ala Phe Gly Pro Lys Lys Lys
 195 200 205
 Glu Ala Ile Ser Lys Leu Leu Asn Glu Gln Val Thr Glu Asp Val Pro
 210 215 220
 Ala Thr Ile Leu His Thr His Pro Asn Val Glu Val Tyr Val Asp Asp
 225 230 235 240
 Glu Ala Ala Pro Asp Cys Leu
 245

<210> 5415

<211> 269

<212> PRT

<213> S.epidermidis

<400> 5415

Leu Phe Val Ile Glu Phe Asp Met Asn Pro Ile Lys Ile Leu Lys Lys
 1 5 10 15
 Glu Arg Ile Ile Met Ser Glu Ala Ala Glu Thr Leu Asp Gly Trp Tyr
 20 25 30
 Ser Leu His Leu Phe Tyr Ala Val Asp Trp Thr Thr Phe Arg Leu Ile
 35 40 45
 Ala Glu Asp Asp Arg Glu Ala Met Ile Thr Glu Leu Glu Thr Phe Ile
 50 55 60
 Lys Asp Lys Thr Val Ala Arg Glu Ser His Gln Gly Asp His Ala Ile
 65 70 75 80
 Tyr Asn Ile Thr Gly Gln Lys Ala Asp Leu Leu Trp Phe Leu Arg
 85 90 95
 Pro Glu Met Lys Glu Leu Asn Gln Ile Glu Asn Glu Phe Asn Lys Leu
 100 105 110
 Arg Ile Ala Asp Tyr Leu Ile Pro Thr Tyr Ser Tyr Val Ser Val Ile
 115 120 125
 Glu Leu Ser Asn Tyr Leu Ala Gly Lys Ser Asp Glu Asp Pro Tyr Glu

130 135 140
 Asn Pro His Val Lys Ala Arg Leu Tyr Pro Glu Leu Pro His Ser Glu
 145 150 155 160
 Tyr Ile Cys Phe Tyr Pro Met Asp Lys Arg Arg Asn Glu Thr Tyr Asn
 165 170 175
 Trp Tyr Met Leu Pro Ile Glu Asp Arg Lys Thr Leu Met Tyr Asn His
 180 185 190
 Gly Met Ile Gly Arg Lys Tyr Ala Gly Lys Ile Lys Gln Phe Ile Thr
 195 200 205
 Gly Ser Val Gly Phe Asp Asp Tyr Glu Trp Gly Val Thr Leu Phe Ser
 210 215 220
 Asn Asp Val Leu Gln Phe Lys Lys Ile Val Tyr Glu Met Arg Phe Asp
 225 230 235 240
 Glu Thr Thr Ala Arg Tyr Gly Glu Phe Gly Ser Phe Tyr Ile Gly His
 245 250 255
 Ile Leu Asn Ile Glu Asp Phe Lys Gln Phe Phe Ser Ile
 260 265

<210> 5416
 <211> 193
 <212> PRT
 <213> S.epidermidis

<400> 5416
 Glu Asn Gln Ile Met Pro Ser Ala Asn Gln Lys Arg Met Ile Lys His
 1 5 10 15
 Ile His Glu Thr Val Phe Ile Leu Leu His Asp Tyr His Phe Asp Glu
 20 25 30
 Ile Thr Val Gln Lys Ile Cys Asp Ile Ala Glu Ile Asn Arg Ser Thr
 35 40 45
 Phe Tyr Arg Tyr Phe Gln Asp Lys Tyr Glu Leu Leu Tyr Thr Leu Pro
 50 55 60
 Asp Phe Ile Thr Gln Gln Ile Ile Ala Lys Ser Asp Thr Ser Ala Asp
 65 70 75 80
 Ile Thr Thr Pro Glu Ser Phe Glu Asp Phe Ile Tyr Tyr Ile Gly Asn
 85 90 95
 Asn Lys Lys Ile Phe Lys His Leu Leu Val Ser Ser Arg Gln Ala Asp
 100 105 110
 Val Phe Arg Ser Leu Thr Asn Val Ser Arg Glu Met Met Leu Asn Asn
 115 120 125
 Pro Thr Arg Lys Arg Ala Pro Leu Ala Gln Lys Ile Arg Glu Ser Lys
 130 135 140
 His Pro Glu Ile Val Ala Asp Phe Tyr Ser Ser Gly Val Ile Glu Val
 145 150 155 160
 Leu Arg Arg Trp Val Glu Asn Asp Tyr Asn Tyr Thr Val Glu Glu Val
 165 170 175
 Phe Val Thr Leu Asn Asn Val Leu Glu Thr Ser Leu Tyr Cys Tyr Asp
 180 185 190
 Lys

<210> 5417
 <211> 437
 <212> PRT
 <213> S.epidermidis

<400> 5417

Cys Gly Gln Ile Asn Asn Lys Ser Lys Arg Leu Arg Trp Cys Ile Ser
 1 5 10 15
 Met Met Ile Ser Ile Lys Leu Ser Glu Leu Leu Pro Lys His Phe His
 20 25 30
 Ser Leu Trp Lys Ala Thr Lys Asp Arg Glu Lys Leu Asn Ile Val Ala
 35 40 45
 Lys Gly Gly Arg Gly Ser Gly Lys Ser Ser Asp Ile Ser Ile Ile Ile
 50 55 60
 Thr Gln Leu Ile Met Arg Tyr Pro Met Asn Ala Val Val Val Arg Lys
 65 70 75 80
 Thr Asp Asn Thr Leu Ala Thr Ser Val Phe Glu Gln Ile Lys Trp Ala
 85 90 95
 Ile Glu Glu Gln Lys Val Ser His Leu Phe Lys Val Lys Val Ser Pro
 100 105 110
 Met Glu Ile Thr Tyr Val Pro Arg Gly Asn Arg Ile Ile Phe Arg Gly
 115 120 125
 Ala Gln Asn Pro Glu Arg Leu Lys Ser Leu Lys Asp Ser Arg Phe Pro
 130 135 140
 Phe Ser Ile Met Trp Ile Glu Glu Leu Ala Glu Phe Lys Thr Glu Asp
 145 150 155 160
 Glu Val Thr Thr Ile Thr Asn Ser Met Leu Arg Gly Glu Leu Asp Asp
 165 170 175
 Gly Leu Phe Tyr Lys Phe Phe Phe Ser Tyr Asn Pro Pro Lys Arg Lys
 180 185 190
 Gln Ser Trp Val Asn Lys Lys Tyr Glu Thr Ser Phe Gln Pro Asp Asn
 195 200 205
 Thr Phe Val His His Ser Thr Tyr Leu Asp Asn Pro Phe Ile Ser Lys
 210 215 220
 Gln Phe Ile Gln Glu Ala Glu Ser Ala Lys Glu Arg Asn Glu Gln Arg
 225 230 235 240
 Tyr Arg Trp Glu Tyr Met Gly Glu Ala Ile Gly Ser Gly Val Val Pro
 245 250 255
 Phe Asn Asn Leu Gln Ile Glu Lys Ile Pro Asp Glu Leu Tyr Asp Asn
 260 265 270
 Phe Asp Asn Ile Arg Asn Gly Ala Asp Phe Gly Tyr Ala Ala Asp Pro
 275 280 285
 Leu Ala Phe Thr Arg Trp His Tyr Asp Lys Lys Lys Arg Ile Leu Tyr
 290 295 300
 Ala Met Asp Glu Ile Tyr Gly Val Gln Met Ser Asn Arg Glu Phe Ala
 305 310 315 320
 Lys Glu Leu Trp Lys Arg Gly Tyr Gln Ser Asp Glu Ile Tyr Cys Asp
 325 330 335
 Ser Ala Glu Pro Lys Ser Ile Asp Glu Leu Lys Lys Glu His Gly Ile
 340 345 350
 Lys Arg Val Lys Gly Val Lys Lys Gly Pro Asp Ser Val Glu Tyr Gly
 355 360 365
 Glu Gln Trp Leu Asn Asp Leu Asp Ala Ile Val Ile Asp Pro Asn Arg
 370 375 380
 Thr Pro Asn Ile Ala Arg Glu Phe Glu Asn Ile Asp Tyr Glu Thr Asp
 385 390 395 400
 Lys Asp Gly Asn Val Lys Pro Arg Leu Glu Asp Lys Asp Asn His Ser
 405 410 415
 Ile Asp Ser Cys Arg Tyr Ala Leu Ser Arg Asp Met Arg Gln Asn Lys
 420 425 430
 Leu Ser Ile Leu Thr

```
<210> 5418
<211> 427
<212> PRT
<213> S.epidermidis
```

Leu 1	Glu	Gly	Ile	Lys 5	Val	Lys	Thr	Gln	Val 10	Leu	Tyr	Gly	Lys	Ser 15	Glu
Ile	Glu	Ile	Asn 20	Val	Pro	Asp	Asp	Ser 25	Thr	Ile	Ile	Glu	Pro 30	Gln	Asn
Ile	Asp	Ala 35	Ile	Gln	Asp	Tyr	Glu 40	Ser	Thr	Ile	Lys	Asn 45	Val	Leu	Arg
Asn	Pro	Thr	Asn	Ser	Lys	Pro	Leu 55	Lys	Glu	Met	Val	Asn 60	Ser	Asn	Asp
Ile 65	Val	Ser	Ile	Val	Ile	Ser	Asp 70	Ile	Thr	Arg	Pro	Thr 75	Pro	Asn	His
Ile	Leu	Val	Pro	Leu 85	Leu	Ile	Glu	Glu 90	Leu	Asn	His	Val	Pro	Arg 95	Glu
Asn	Phe	Val	Ile 100	Ile	Asn	Gly	Thr	Gly 105	Thr	His	Arg	Asp 110	Gln	Thr	Arg
Asp	Glu	Leu	Ile 115	Gln	Met	Leu	Gly 120	Glu	Asp	Ile	Val	Asn 125	Ser	Val	Lys
Ile	Val	His	Asn	His	Cys	Ser 135	Glu	Lys	Glu	Ser	Leu 140	Ala	Lys	Val	Gly
His 145	Ser	Gln	Tyr	Gly	Cys 150	Asp	Val	Tyr	Leu	Asn 155	Lys	Ala	Tyr	Val	Glu
Ser	Asp	Phe	Lys	Ile 165	Val	Thr	Gly	Phe	Ile	Glu	Pro	His	Phe	Phe 175	Ala
Gly	Phe	Ser	Gly 180	Gly	Pro	Lys	Gly 185	Ile	Met	Pro	Gly	Ile	Ala 190	Gly	Leu
Glu	Thr	Ile	Gln 195	Thr	Phe	His	Asn 200	Ala	Lys	Met	Ile	Gly 205	Asp	Pro	Arg
Ser	Thr	Trp	Gly	Asn	Leu	Glu 215	Asp	Asn	Pro	Val	Gln 220	Asp	Met	Ala	Arg
Glu 225	Val	Asn	Arg	Met	Cys 230	Lys	Pro	Asp	Phe	Leu	Asn 235	Val	Ala	Leu	240
Asn	Lys	Ser	Lys	Glu 245	Ile	Thr	Ala	Ala	Phe	Ala	Gly	Glu	Ile	Leu	Asp
Thr	His	Lys	Glu 260	Gly	Cys	Ala	Tyr	Val 265	Lys	Asp	His	Ala	Met	Phe	Lys
Cys	Glu	Gln	Arg	Phe	Asp	Ile	Val	Ile 280	Ala	Ser	Asn 285	Ser	Gly	Tyr	Pro
Leu	Asp	Gln	Asn	Leu	Tyr	Gln 295	Thr	Val	Lys	Gly	Met 300	Ser	Ala	Ala	Ser
Lys 305	Val	Val	Lys	Lys	Asp	Gly 310	His	Ile	Ile	Met	Val	Ser	Glu	Cys	Ala
Asp	Gly	Phe	Pro	Asp 325	His	Gly	Lys	Phe	Ala 330	Glu	Ile	Phe	Lys	Met	Ala
Asp	Thr	Pro	Gln 340	Gly	Ile	Leu	Glu	Leu 345	Ile	His	Asn	Pro	Asn	Phe	Lys
Glu	Val	Asp	Gln 355	Trp	Gln	Val	Gln 360	Lys	Gln	Ala	Ser	Ile 365	Gln	Thr	Phe
Ala	Asn	Val	His	Val	Tyr	Ser 375	Glu	Leu	Thr	Asp	Gln 380	Leu	Lys	Lys	Asp

Ser Met Leu Ile Pro Thr Ser Asn Ile Glu His Thr Ile Gln Glu Leu
 385 390 395 400
 Glu His Arg Tyr Gly Arg Lys Leu Thr Ile Gly Val Met Pro Gln Gly
 405 410 415
 Pro Leu Thr Ile Pro Tyr Val Glu Asp Lys Glu
 420 425

<210> 5419
 <211> 111
 <212> PRT
 <213> S.epidermidis

<400> 5419
 Leu Val Val Phe Ile Leu Ser Glu Val Gly Val Tyr Met Thr Glu Ser
 1 5 10 15
 Ser Gln Arg Gly Asp Tyr Glu Arg Arg Ile Lys Arg Leu Glu Asp Asn
 20 25 30
 Asp Glu Lys Ile Phe Asn Ser Leu Glu Gln Ile Lys Asp Gly Gln His
 35 40 45
 Asn Gln Asn Leu Ile Asn Gln Lys Met Asn Phe Thr Leu Asp Ser Ile
 50 55 60
 Asn Arg Glu Arg Glu Leu Glu Ser Gln Asn Lys Lys Glu Asn Gln Lys
 65 70 75 80
 Asn Ile Lys Asp Ile Lys Met Trp Val Leu Gly Leu Val Gly Thr Ile
 85 90 95
 Ala Gly Ser Leu Ile Val Ala Val Leu Arg Met Phe Phe Gly Val
 100 105 110

<210> 5420
 <211> 114
 <212> PRT
 <213> S.epidermidis

<400> 5420
 Gln Met Asn Phe Lys Gln Met His Gln Phe Asn Tyr Arg Leu Pro Glu
 1 5 10 15
 Leu Leu Thr Asn Tyr Leu His Leu Ile His Ser Thr Ser Glu Pro Arg
 20 25 30
 Met Cys His Ala Met Lys Lys Gly Glu Ile His Asp Tyr Cys Ile Ser
 35 40 45
 His Tyr Tyr Ile Phe Tyr Tyr Ser Asn Phe Asn Asn Leu Ala Thr Lys
 50 55 60
 Arg Ile Arg Tyr Arg Asp Phe Cys Ser His Arg Arg Ala Phe Ser Tyr
 65 70 75 80
 Arg Tyr Trp Ser Ser Glu Cys Leu Arg Tyr Ile Arg Ser Asp Lys Tyr
 85 90 95
 Ser Leu Lys Cys His Thr Tyr Leu Cys Arg Ser Tyr Pro Tyr Phe Ile
 100 105 110
 Asn Pro

<210> 5421
 <211> 85
 <212> PRT
 <213> S.epidermidis

<400> 5421

Phe Val Asn Val Lys Lys Glu Gly Leu Ile Met Arg Phe Lys Leu Lys
 1 5 10 15
 Glu Asp Glu Ile Leu Glu Phe Leu Asp Leu Asn Phe Pro Gln Gln Thr
 20 25 30
 Phe Glu Lys Gly Arg Leu Leu Ile Gly Gln Asn Lys Arg Gln Pro Leu
 35 40 45
 His Val Tyr Tyr Phe Gly Lys Lys Phe Leu Ala Leu Leu Asn Val Asn
 50 55 60
 Phe Asn Thr Phe Glu Tyr Ile Lys Val Asp Glu Val Asp Tyr Asn Asp
 65 70 75 80
 Ile Lys Lys Ser Leu
 85

<210> 5422

<211> 462

<212> PRT

<213> S.epidermidis

<400> 5422

Ile Gly Gly Val Ser Met Ala Lys Lys Lys Val Ile Phe Glu Cys Met
 1 5 10 15
 Ala Cys Gly Tyr Gln Ser Pro Lys Trp Met Gly Lys Cys Pro Asn Cys
 20 25 30
 Gly Ala Trp Asn Gln Met Glu Glu Ile Val Glu Lys Val Ala His Pro
 35 40 45
 Lys His Gly Val Lys Thr Lys Glu Thr Ala Gly Lys Val Gln Lys Leu
 50 55 60
 Asn Ser Val Lys His Glu Ala Thr Pro Arg Leu Leu Thr Glu Ser Lys
 65 70 75 80
 Glu Phe Asn Arg Val Leu Gly Gly Gly Ile Val Ser Gly Ser Leu Val
 85 90 95
 Leu Ile Gly Gly Asp Pro Gly Ile Gly Lys Ser Thr Leu Leu Leu Gln
 100 105 110
 Ile Cys Ala Ala Leu Ser Gln Asn Lys Asn Val Leu Tyr Ile Thr Gly
 115 120 125
 Glu Glu Ser Ile Asn Gln Thr Lys Leu Arg Ala Asp Arg Leu Glu Glu
 130 135 140
 Asp Ser Ser His Leu Asn Val Leu Ala Glu Thr Asp Leu Glu Val Ile
 145 150 155 160
 His Gln Thr Val Lys Glu Glu Arg Pro Asp Leu Leu Val Val Asp Ser
 165 170 175
 Ile Gln Thr Ile Tyr His Pro Glu Ile Ser Ser Ala Pro Gly Ser Val
 180 185 190
 Ser Gln Val Arg Glu Ser Thr Gln Ser Leu Met Asn Ile Ala Lys Gln
 195 200 205
 Met Asn Ile Ala Thr Phe Ile Val Gly His Val Thr Lys Glu Gly Gln
 210 215 220
 Ile Ala Gly Pro Arg Leu Leu Glu His Met Val Asp Thr Val Leu Tyr
 225 230 235 240
 Phe Glu Gly Asp Glu His His Ala Tyr Arg Ile Leu Arg Ala Val Lys
 245 250 255
 Asn Arg Phe Gly Ser Thr Asn Glu Met Gly Ile Phe Glu Met Lys Gln
 260 265 270
 Ser Gly Leu Lys Gly Val Leu Asn Pro Ser Glu Met Phe Leu Glu Glu
 275 280 285

Arg Ser Thr Asn Val Pro Gly Ser Thr Ile Val Pro Thr Met Glu Gly
 290 295 300
 Thr Arg Pro Leu Leu Ile Glu Val Gln Ala Leu Val Thr Pro Thr Thr
 305 310 315 320
 Phe Asn Asn Pro Arg Arg Met Ala Thr Gly Ile Asp His Asn Arg Leu
 325 330 335
 Ser Leu Leu Met Ala Val Leu Glu Lys Lys Glu Asn Tyr Leu Leu Gln
 340 345 350
 Gln Gln Asp Ala Tyr Ile Lys Val Ala Gly Gly Val Lys Leu Thr Glu
 355 360 365
 Pro Ala Val Asp Leu Ser Ile Val Ala Thr Ala Ser Ser Phe Lys
 370 375 380
 Asp Gln Ala Val Asp Gly Leu Asp Cys Phe Val Gly Glu Val Gly Leu
 385 390 395 400
 Thr Gly Glu Val Arg Arg Val Ser Arg Ile Glu Gln Arg Val Gln Glu
 405 410 415
 Ala Ala Lys Leu Gly Phe Lys Arg Ala Ile Ile Pro Gln Thr Asn Ile
 420 425 430
 Gly Gly Trp Thr Phe Pro Glu Gly Ile Gln Val Val Gly Val Ser Ser
 435 440 445
 Val His Glu Ala Leu Lys Tyr Ala Leu His Ser Lys Gln Arg
 450 455 460

<210> 5423
 <211> 48
 <212> PRT
 <213> S.epidermidis

<400> 5423
 Leu Phe Phe Val Phe Gln Tyr Lys Tyr Tyr Met Ile Phe Asn Phe Ala
 1 5 10 15
 Thr Glu Pro Tyr Leu Leu Leu Arg Lys Lys Tyr Leu Arg Gln Gln Met
 20 25 30
 Met Ser Gln Val Leu Asn Leu Ser Leu Lys Leu Phe Phe Asn Trp Glu
 35 40 45

<210> 5424
 <211> 69
 <212> PRT
 <213> S.epidermidis

<400> 5424
 Lys Phe Tyr Val Val Gly Lys Cys Asn Thr Leu Glu Lys Leu Leu Val
 1 5 10 15
 Lys Ile Ala Cys Ile Lys Glu Ile Tyr Lys Lys Thr Gly Ser Val Ala
 20 25 30
 Lys Leu Lys Leu Tyr Ala His Leu Tyr Lys Thr Ile Lys Ala Asn Ile
 35 40 45
 Val Leu Thr Val Lys Ser Phe Ile Ser Ile Asn Tyr Phe Ser Phe Phe
 50 55 60
 Ser Ile Asn Ile Thr
 65

<210> 5425
 <211> 484
 <212> PRT

<213> S.epidermidis

<400> 5425

```

His Thr Tyr Val Asn Glu Val Ile Ser Ile Asn Trp Pro Trp Asp Lys
1      5      10      15
Pro Tyr His Glu Gln Val Val Glu Gln Ile Lys Pro Lys Tyr Glu Thr
      20      25      30
Gln Glu Glu Met Ile Leu Arg Leu Val Arg Glu His Lys Glu Asn Ile
      35      40      45
Asp Asn Ile Thr Met Gly Glu Arg Tyr Tyr Asn His His Pro Asp Ile
      50      55      60
Leu Asp Ala Pro Phe Lys Arg Asp Val Asn Gly Asp Tyr Asp Glu Thr
65      70      75      80
Lys Pro Asp Trp Arg Met Tyr Thr Asn Tyr His Gln Asn Leu Val Asp
      85      90      95
Gln Lys Val Ala Tyr Ala Val Ala Asn Pro Val Thr Phe Gly Val Asp
      100     105     110
Asn Asp Lys Ala Leu Lys Gln Ile Gln His Thr Leu Asn His Lys Trp
      115     120     125
Asp Asp Lys Leu Val Asp Ile Leu Thr Ala Ala Ser Asn Lys Gly Ile
130     135     140
Glu Trp Val Gln Pro Tyr Val Asp Glu Glu Gly Glu Phe Lys Thr Phe
145     150     155     160
Arg Val Pro Ala Glu Gln Ala Val Pro Ile Trp Thr Asn Lys Glu Arg
      165     170     175
Asp Glu Leu Gln Ala Phe Ile Arg Val Tyr Glu Leu Asp Gly Ala Glu
      180     185     190
Arg Val Glu Tyr Trp Thr Lys Asp Val Thr Phe Tyr Glu Leu Lys
      195     200     205
Glu Gly Gln Leu Ile Pro Asp Phe Tyr Arg Ser Glu Asp His Ile Gln
210     215     220
Pro His Tyr Tyr Gln Gly Asn Lys Leu Met Ser Trp Gly Arg Val Pro
225     230     235     240
Phe Ile Pro Phe Lys Asn Asn Pro Gln Glu Val Ser Asp Leu Phe Met
      245     250     255
Tyr Lys Thr Ile Ile Asp Ala Leu Asp Lys Arg Leu Ser Asp Thr Gln
      260     265     270
Asn Thr Phe Asp Glu Ser Val Glu Leu Ile Tyr Ile Leu Lys Gly Tyr
275     280     285
Glu Gly Glu Asp Met Lys Asp Phe Met His Asn Leu Lys Tyr Tyr Lys
290     295     300
Ala Ile Ser Val Ala Gly Glu Ser Gly Ser Gly Val Asp Thr Ile Lys
305     310     315     320
Val Glu Val Pro Ile Asp Ser Val Lys Glu Tyr Thr Lys Met Leu Arg
      325     330     335
Asp Tyr Ile Ile Glu Phe Gly Gln Gly Val Asp Phe Gln Gln Asp Lys
340     345     350
Phe Gly Asn Ser Pro Ser Gly Ile Ala Leu Lys Phe Met Tyr Ser Asn
355     360     365
Leu Asp Leu Lys Ala Asn Lys Leu Lys Asn Lys Thr Leu Thr Ala Leu
370     375     380
Gln Glu Leu Leu Gln Tyr Ile Ile Asp Phe Tyr Arg Leu Asp Val Lys
385     390     395     400
Val Gln Asp Ile Glu Ile Thr Phe Asn Phe Asn Val Met Val Asn Glu
      405     410     415
Leu Glu Asn Ser Gln Ile Ala Met Asn Ser Thr Gly Leu Leu Ser Lys

```



```

      115              120              125
His His Met Gly Glu Ile Ile Asp Phe Ile Lys Glu Leu Val Asp Glu
      130              135              140
Gly Tyr Ala Tyr Glu Ser Asp Gly Asp Val Tyr Phe Arg Thr Arg Gln
145      150              155              160
Phe Asp Gly Tyr Gly Lys Leu Ser His Gln Ser Leu Asp Asp Leu Lys
      165              170              175
Val Gly Ala Arg Ile Glu Ala Gly Glu Gln Lys Glu Asp Ala Leu Asp
      180              185              190
Phe Thr Leu Trp Lys Lys Ala Lys Pro Gly Glu Ile Ser Trp Asn Ser
      195              200              205
Pro Phe Gly Lys Gly Arg Pro Gly Trp His Ile Glu Cys Ser Val Met
      210              215              220
Ala Tyr His Glu Leu Gly Ser Thr Ile Asp Ile His Ala Gly Gly Ser
225      230              235              240
Asp Leu Gln Phe Pro His His Glu Asn Glu Ile Ala Gln Ser Glu Ala
      245              250              255
His Asn His Ala Pro Phe Ala Asn Tyr Trp Met His Asn Gly Phe Ile
      260              265              270
Asn Ile Asp Asn Glu Lys Met Ser Lys Ser Leu Gly Asn Phe Ile Leu
      275              280              285
Val His Asp Ile Ile Lys Glu Val Asp Pro Asp Val Leu Arg Phe Phe
      290              295              300
Met Ile Ser Val His Tyr Arg Ser Pro Ile Asn Tyr Asn Leu Glu Leu
305      310              315              320
Val Gly Ala Ala Arg Ser Gly Leu Glu Arg Ile Arg Asn Ser Tyr Lys
      325              330              335
Leu Ile Glu Glu Arg Glu Gln Ile Ala Ser Asp Leu Glu Glu Gln Ser
      340              345              350
Glu Tyr Ile Gln Gln Ile Asp Lys Ile Leu Asn Gln Phe Glu Thr Val
      355              360              365
Met Asp Asp Asp Phe Asn Thr Ala Asn Ala Val Thr Ala Trp Tyr Asp
      370              375              380
Leu Ala Lys Leu Ala Asn Lys Tyr Val Leu Glu Asn Thr Thr Ser Thr
385      390              395              400
Lys Val Leu Asn Arg Phe Lys Glu Val Tyr Ser Ile Phe Ser Asp Val
      405              410              415
Leu Gly Val Pro Leu Lys Ser Lys Glu Thr Glu Glu Leu Leu Asp Glu
      420              425              430
Asp Ile Glu Gln Leu Ile Glu Glu Arg Asn Glu Ala Arg Lys Asn Lys
      435              440              445
Asp Phe Ala Arg Ala Asp Glu Ile Arg Asp Met Leu Lys Ala Arg His
450      455              460
Ile Ile Leu Glu Asp Thr Pro Gln Gly Val Arg Phe Lys Arg Gly
465      470              475

```

<210> 5428

<211> 183

<212> PRT

<213> S.epidermidis

<400> 5428

```

Thr Ser Ser Val Arg Gly Lys Val Met Lys Lys Arg Tyr Leu Ile Ile
1      5      10      15
Asp Gly Tyr Asn Met Ile Gly Gln Ser Ser Thr Leu Ser Thr Val Ala
20      25      30

```


Lys Glu Asn Leu Glu Glu Ala Arg Glu Gln Leu Leu Asp Thr Ile Ala
 35 40 45
 Asn Tyr Asn Ala Leu Ile Ala Asp Glu Ile Val Cys Val Phe Asp Ala
 50 55 60
 Tyr Glu Gln Ser Gly Ile Glu Arg Glu Tyr Phe Tyr His Gly Val Lys
 65 70 75 80
 Thr Ile Phe Thr Lys Glu Lys Glu Thr Ala Asp Ser Phe Ile Glu Arg
 85 90 95
 Tyr Val Tyr Glu Leu Tyr Asn Lys His Thr Thr His Ile Thr Val Val
 100 105 110
 Thr Ser Asp Met Ser Glu Gln His Ala Ile Phe Gly Ser Gly Ala Tyr
 115 120 125
 Arg Ile Ser Ser Arg Glu Met Trp Arg Glu Leu Lys Glu Asn Glu Val
 130 135 140
 Val Val Asn Lys Ser Leu Asp Asp Phe Ser Glu Lys Lys Pro Arg Ile
 145 150 155 160
 Arg Ile Pro Leu Ser Asn Glu Ile Leu Glu Glu Phe Glu Lys Ile Arg
 165 170 175
 Arg Gly Asn Gln Lys Lys Asp
 180

<210> 5429

<211> 362

<212> PRT

<213> S.epidermidis

<400> 5429

Glu Ala Thr Val Met Ser Glu Lys Val Lys Phe Glu Lys Arg Glu Ser
 1 5 10 15
 Leu Lys Glu Lys Pro Asp Thr Ala Asn Leu Gly Phe Gly Gln Tyr Phe
 20 25 30
 Thr Asp Tyr Met Leu Ser Val Asp Tyr Asp Ala Asp Gln Gly Trp His
 35 40 45
 Asp Met Lys Ile Val Pro Tyr Ala Pro Phe Glu Ile Ser Pro Ala Ala
 50 55 60
 Gln Gly Leu His Tyr Gly Gln Ala Val Phe Glu Gly Leu Lys Ala Tyr
 65 70 75 80
 Lys His Asn Gly Glu Val Val Leu Phe Arg Pro Asp Gln Asn Phe Lys
 85 90 95
 Arg Ile Asn Asn Ser Leu Ala Arg Leu Glu Met Pro Glu Val Asp Glu
 100 105 110
 Glu Ala Leu Leu Glu Gly Leu Lys Gln Leu Ile Asp Val Glu Arg Asp
 115 120 125
 Trp Val Pro Glu Gly Glu Gly Gln Ser Leu Tyr Ile Arg Pro Phe Val
 130 135 140
 Phe Ala Thr Glu Gly Val Leu Gly Val Arg Ser Ser His Gln Tyr Lys
 145 150 155 160
 Leu Leu Ile Ile Leu Ser Pro Ser Gly Ala Tyr Tyr Gly Gly Asp Thr
 165 170 175
 Leu Lys Ser Thr Lys Ile Tyr Val Glu Asp Glu Tyr Val Arg Ala Val
 180 185 190
 Arg Gly Gly Val Gly Phe Ala Lys Val Ala Gly Asn Tyr Ala Ala Ser
 195 200 205
 Leu Leu Ala Gln Thr Asn Ala Asn Lys Leu Gly Tyr Asp Gln Val Leu
 210 215 220
 Trp Leu Asp Gly Val Glu Gln Lys Tyr Val Glu Glu Val Gly Ser Met

225 230 235 240
 Asn Ile Phe Phe Val Glu Asn Gly Lys Val Val Thr Pro Ala Leu Asn
 245 250 255
 Gly Ser Ile Leu Pro Gly Ile Thr Arg Lys Ser Ile Ile Gln Leu Ala
 260 265 270
 Glu Asp Leu Gly Tyr Glu Val Glu Glu Arg Arg Val Ser Ile Glu Glu
 275 280 285
 Leu Phe Asn Ala Tyr Asp Lys Gly Glu Leu Thr Glu Val Phe Gly Ser
 290 295 300
 Gly Thr Ala Ala Val Ile Ser Pro Val Gly Thr Leu Arg Tyr Glu Asp
 305 310 315 320
 Arg Glu Ile Val Ile Asn Asn Asn Glu Pro Gly Lys Ile Thr Gln Lys
 325 330 335
 Leu Tyr Asp Thr Tyr Thr Gly Ile Gln Ser Gly Lys Leu Glu Asp Lys
 340 345 350
 Tyr Gly Trp Arg Val Glu Val Pro Lys Tyr
 355 360

<210> 5430

<211> 125

<212> PRT

<213> S.epidermidis

<400> 5430

Phe Lys Gly Val Asn Val Leu Glu Pro Ile Lys Glu Gln Glu Val Leu
 1 5 10 15
 Asp Leu Leu Thr Ser Tyr Ser Asn Gln Pro Val Tyr Leu His Val Glu
 20 25 30
 Thr Thr Asn Gly Ala Tyr Ala Asn His Phe Asp Gln Arg Val Phe Asn
 35 40 45
 Ala Gly Thr Phe Leu Arg Asn Ile Val Val Thr Phe Glu His Ala Gln
 50 55 60
 Leu Lys Gly Gly Asp Lys Asp Pro Tyr Arg Val Gly Leu Lys Leu Lys
 65 70 75 80
 Asp Gly Gly Trp Val Tyr Val Gln Gly Leu Thr His Tyr Glu Val Asn
 85 90 95
 Glu Asn Asn Glu Phe Leu Ile Ala Gly Phe Asn Tyr Glu Gly Gln Leu
 100 105 110
 Ala Ala Thr Ile Glu Ile Ser Lys Gln Pro Phe Thr Ile
 115 120 125

<210> 5431

<211> 41

<212> PRT

<213> S.epidermidis

<400> 5431

Glu Thr Leu Val Ile Ser Leu Val Ile Gly Phe Val Cys Ser Phe Val
 1 5 10 15
 Phe Leu Gly Val Leu Ser Leu Glu Gly Leu Asp Gly Val Leu Leu Gly
 20 25 30
 Phe Asp Gly Phe Leu Val Ser Ala Trp
 35 40

<210> 5432

<211> 314

<212> PRT

<213> S.epidermidis

<400> 5432

```

Leu Leu Met Val Lys Gln Val Arg Leu Gly Lys Ser Asp Val Asn Val
1      5      10      15
Phe Pro Ile Ala Leu Gly Thr Asn Ala Val Gly Gly His Asn Leu Tyr
      20      25      30
Pro Asn Leu Asp Glu Glu Gln Gly Lys Glu Val Val Arg Gln Ala Ile
      35      40      45
Asp Asn Gly Ile Thr Leu Leu Asp Thr Ala Tyr Ile Tyr Gly Pro Glu
      50      55      60
Arg Ser Glu Glu Leu Val Gly Gln Val Val Lys Glu Tyr Pro Arg Glu
      65      70      75      80
Lys Val Gln Ile Ala Thr Lys Gly Ser His Val Ile Lys Glu Asn Glu
      85      90      95
Glu Val Val Gln Asn Asn Asp Pro Glu Tyr Leu Lys Gln Gln Val Glu
      100     105     110
Asn Ser Leu Glu Arg Leu Gln Val Asp Tyr Ile Asp Leu Tyr Tyr Ile
      115     120     125
His Phe Pro Asp Asp Asp Thr Pro Lys Asp Lys Ala Val Ala Ala Leu
      130     135     140
Lys Glu Leu Lys Asp Glu Gly Lys Ile Lys Ala Ile Gly Val Ser Asn
      145     150     155     160
Phe Ser Leu Glu Gln Leu Lys Glu Ala Asn Lys Asp Gly Tyr Val Asp
      165     170     175
Val Val Gln Leu Glu Tyr Asn Leu Leu His Arg Glu Asn Glu Glu Val
      180     185     190
Met Ala Tyr Ala Ala Glu Asn Asn Ile Thr Phe Val Pro Tyr Phe Pro
      195     200     205
Leu Ala Ser Gly Ile Leu Ala Gly Lys Tyr Asp Glu Asn Gln Thr Phe
      210     215     220
Glu Asp His Arg Ala Glu Arg Pro Asp Phe Gln Pro Asp Val Phe Lys
      225     230     235     240
Asp Asn Val Arg Arg Val Lys Ala Leu Thr Asp Ile Ala Glu Ala His
      245     250     255
Asp Thr Thr Ile Ala Asn Val Val Leu Ala Phe Tyr Leu Thr Arg Pro
      260     265     270
Ser Leu Asp Val Val Ile Pro Gly Ala Lys Arg Ala Glu Gln Val Val
      275     280     285
Glu Asn Ile Asp Ala Ala Asn Ile Glu Leu Ser Gln Gly Glu Ile Asp
      290     295     300
Lys Ile Asp Ser Leu Phe Pro Ile Lys Lys
      305     310

```

<210> 5433

<211> 41

<212> PRT

<213> S.epidermidis

<400> 5433

```

Asn Thr Ala Val Ile Tyr Ile Phe Ile Ile Arg Asn Ser Leu Val Thr
1      5      10      15
Ile Phe Leu Met Asn Ile Val Ile Ile Ser Thr Ile Tyr Val Ile Arg
      20      25      30
Ile Leu Arg Asn Val Glu Arg Ile Asn

```


Phe Asp Cys Val Gln Lys Asp Ala Val Tyr Pro Tyr Ile Val Val Gly
 35 40 45
 Glu Thr Asn Val Thr Asn Lys Glu Thr Thr Thr Ser Met Phe Glu Asp
 50 55 60
 Val Gly Val Thr Leu His Val Tyr Ser Gln Ala Arg Asn Arg Asp Glu
 65 70 75 80
 Ala Ser Gln Ile Ile Gln Tyr Leu Gly Phe Val Leu Asn Ser Glu Ile
 85 90 95
 Glu Ile Asn Asn Tyr Ser Phe Ile Lys Ser Arg Ile Asp Thr Gln Glu
 100 105 110
 Val Ile Thr Asp Ile Asp Gln Tyr Thr Lys His Gly Ile Ile Arg Leu
 115 120 125
 Val Phe Lys Tyr Arg His Asn Thr Leu Gln Arg Ser Val Thr Asn Gly
 130 135 140
 Ala Glu
 145

<210> 5437
 <211> 56
 <212> PRT
 <213> S.epidermidis

<400> 5437
 Trp Tyr Leu Leu Asn Tyr Thr Lys Ala Pro Tyr Phe Ser Lys Tyr Phe
 1 5 10 15
 Asn Ile Lys Leu His Ile Asn Thr Lys Tyr Phe Gly Glu Thr Leu Glu
 20 25 30
 Gly Thr Gly Gln Ala Glu Asp Tyr Arg Leu Lys Leu Ser Pro Lys Lys
 35 40 45
 Ala Ser Gln Gln Tyr Glu Leu Phe
 50 55

<210> 5438
 <211> 54
 <212> PRT
 <213> S.epidermidis

<400> 5438
 Leu Ser Leu Phe Tyr Lys His Cys Asn Ile Ile Lys Thr Tyr Asn Ile
 1 5 10 15
 Asn Lys Thr Asn Lys His Leu Lys Ile Ile Tyr Thr Lys Ile His Thr
 20 25 30
 Thr Asn Tyr Ile Tyr Leu Phe Ile Ile Lys Lys Phe Lys Ile Thr Ser
 35 40 45
 His Leu Gln Thr Ser Leu
 50

<210> 5439
 <211> 158
 <212> PRT
 <213> S.epidermidis

<400> 5439
 Arg Leu Ile Leu Lys Arg Gly Lys His Val Met Leu Lys Arg Arg Ser
 1 5 10 15
 Ser Lys Phe Leu Gly Leu Leu Ala Thr Leu Ala Leu Ala Ile Val Leu

```
<210> 5440
<211> 618
<212> PRT
<213> S.epidermidis
```

<400> 5440															
Leu 1	Pro	Ile	Leu	Leu 5	Lys	Thr	Leu	Gln	Gly 10	Ile	Gly	Gln	Ser	Leu 15	Pro
Val	Glu	Thr	Lys 20	Leu	Asn	Glu	Lys	Leu 25	Asn	Glu	Asp	Gly	Ser 30	Leu	Glu
Ile	Glu	Met 35	Val	Glu	Asn	Lys	Ala 40	Thr	Phe	Asp	Ala	Ile 45	Gly	Ala	Ile
Thr	Lys 50	Met	Trp	Thr	Ile	Thr 55	Gly	Val	Gly	Gly	Ala 60	Asp	Asp	Leu	Asn
Glu 65	Tyr	Arg	Ile	Val	Met 70	Leu	Asp	Lys	Thr	Thr 75	Val	Gly	Gln	Lys	Glu 80
Lys	Leu	Thr	Ile 85	Lys	Ala	Arg	Pro	Val	Glu 90	Leu	Asp	Asp	Leu 95	Asn	Asn
Leu	Arg	Val	Tyr 100	Glu	Val	Tyr	Asn	Gly 105	Ser	Phe	Thr	Gly	Lys 110	Arg	Tyr
Phe	Asp	Leu 115	Val	Phe	Lys	Asp	Thr 120	Gly	Tyr	Lys	Tyr	Glu 125	Leu	His	Ala
Lys	Val 130	Ser	Ser	Ser	Lys	Phe 135	Glu	Asn	Leu	Gly	Asn	His	Asp	Thr	Asn
Leu 145	Glu	Leu	Phe	Lys	Lys 150	Gly	Leu	Glu	Arg	Tyr 155	Asp	Leu	Glu	Tyr	Glu 160
Tyr	Glu	Pro	Lys 165	Thr	Lys	Thr	Phe	His	Leu 170	Phe	Asp	Val	Val	Gln	Arg 175
Lys	Ala	Asp	Tyr 180	Tyr	Ile	Lys	Ala	Gly 185	Val	Asn	Ala	Asn	Asn	Val	Lys
Val	Gln	Glu 195	Asp	Ala	Ser	Lys	Cys 200	Tyr	Thr	Tyr	Ile	Arg	Gly	Tyr	Gly
Gly	Phe 210	Asp	Asp	Gln	Gln	Thr 215	Phe	Asn	Glu	Ala	Ser 220	Leu	Gln	Tyr	Glu
Tyr 225	Thr	His	Pro	Leu	Ala 230	Asp	Leu	Ile	Gly	Lys 235	Arg	His	Ala	Pro	Pro 240
Val	Val	Asp	Gly 245	Arg	Met	Thr	Lys	Gly	Asp 250	Thr	Leu	Lys	Lys	Ala	Met

Glu Leu Val Ile Gln Glu Ser Leu Lys Thr Ser Val Thr Leu Asp Phe
 260 265 270
 Ile Ser Leu Gln Lys His Phe Lys Glu Ala Val Pro Arg Val Gly Asp
 275 280 285
 Ile Val Asn Val Val Asp Asp Leu Ile Gly Leu Asn Glu Phe Val Arg
 290 295 300
 Ile Ile Glu Ile Thr Thr His Arg Asp Ile Tyr Asn Lys Ile Ile Lys
 305 310 315 320
 Gln Asp Val Val Leu Gly Glu Phe Arg Leu Gln Asp Arg Tyr Met Lys
 325 330 335
 Ala Val Asn Thr Ala Ala Asn Tyr Val Lys Ala Ile Lys Ser Asn Lys
 340 345 350
 Ser Asp Pro Ala Lys Asp Leu Arg Ser Met Gln Ala Gln Thr Gln Ala
 355 360 365
 Asn Thr Lys Thr Thr Gln Asp Leu Gln Lys Lys Thr Asp Asp Ile Lys
 370 375 380
 Lys Arg Leu Glu Ser Ala His Ala Lys Ser Val Thr Thr Ala Asn Gly
 385 390 395 400
 Thr Ile Val His Asp Phe Thr Pro Lys Ser Lys Ile Arg Lys Val Lys
 405 410 415
 Thr Ile Gly Thr Ile Gly Asp Ser Val Ala Lys Gly Thr Gly Ala Lys
 420 425 430
 Thr Asn Phe Thr Gln Met Leu Ala Lys Lys Ile Lys Ala Lys Ser Thr
 435 440 445
 Asn Leu Ala Val Ser Gly Ala Thr Ile Ser Thr Asn Lys Asp Asn Ser
 450 455 460
 Ile Tyr Glu Gln Ala Thr Lys Ile Lys Gly Asp Leu Ile Ile Val Gln
 465 470 475 480
 Gly Thr Asp Asp Asp Trp Thr Asn Asp Ile Lys Ile Gly Thr Asp Lys
 485 490 495
 Thr Asp Ile Lys Thr Phe Tyr Gly Ala Phe Tyr Ser Ala Ile Ser Lys
 500 505 510
 Ile Lys Ser Asn Asn Pro Lys Ser Lys Ile Ile Val Met Thr Pro Thr
 515 520 525
 Lys Gln Cys Tyr Ile Lys Asp Gly Lys Val Val Arg Lys Asp Thr Thr
 530 535 540
 Lys Asn Asp Leu Gly Tyr Thr Leu Ala Asp Tyr Val Asp Val Gln Ile
 545 550 555 560
 Asp Ala Cys Asn Glu Leu Asp Ile Pro Val Tyr Asp Ala Tyr His Ser
 565 570 575
 Thr Gln Phe Lys Pro Asn Ile Pro Ser Tyr Arg Lys Ser Ser Met Pro
 580 585 590
 Asp Gly Val His Pro Asn Glu Lys Gly His Glu Val Ile Met Tyr Glu
 595 600 605
 Leu Val Lys Asn Phe Tyr Gly Phe Tyr Gly
 610 615

<210> 5441

<211> 574

<212> PRT

<213> S.epidermidis

<400> 5441

Asn Gly Ile Phe Lys Glu Lys Glu Thr Thr Met Thr Lys Gln Asn Ile
 1 5 10 15
 Phe Ile Asp Asp Ile Tyr Trp Glu Arg Val Gln Leu Phe Val Lys Gly

465 470 475 480
 Asp Tyr Ser Ser Leu Ile Tyr Glu Phe Ser Val Phe Lys Lys Pro Met
 485 490 495
 Leu Phe Tyr Ala Phe Asp Leu Glu Asp Tyr Ile Tyr Thr Arg Asp Phe
 500 505 510
 Tyr Glu Pro Tyr Glu Thr Phe Val Pro Gly Lys Ile Val Lys Thr Phe
 515 520 525
 Asp Glu Leu Ile Leu Ala Leu Glu Asn Asn Asp Phe Glu Leu Glu Lys
 530 535 540
 Val Lys Pro Phe Leu Asn Lys Asn Phe Lys Tyr Lys Asp Gly Lys Ser
 545 550 555 560
 Ser Glu Arg Leu Val Lys Asp Leu Phe Asn Lys Phe Phe Gln
 565 570

<210> 5442
 <211> 94
 <212> PRT
 <213> S.epidermidis

<400> 5442
 Phe Cys Val Phe Leu Thr Ile Thr Ser Pro Asp Cys Arg Leu Ile Ser
 1 5 10 15
 Ser Thr Cys Leu Asn Val Leu Ile Asn Lys Cys Leu Leu Phe Lys Val
 20 25 30
 Gln Phe Arg His Arg Ile Leu Pro Thr Leu Thr Val Lys His Leu
 35 40 45
 Tyr Leu Thr Tyr Lys Lys Lys Thr Leu His Lys Gln Cys Leu Met Ile
 50 55 60
 Met Phe Cys Tyr Leu Phe Glu Phe Met Tyr Ser Cys His Ile Ser Met
 65 70 75 80
 Ser His Gln Tyr Ile Lys Lys Leu Pro Val Cys Ser His Gly
 85 90

<210> 5443
 <211> 128
 <212> PRT
 <213> S.epidermidis

<400> 5443
 Arg Ser Thr Phe Lys Met Met Lys Val Phe Ile Ile Leu Gly Ala Leu
 1 5 10 15
 Asn Ala Met Met Ala Val Gly Thr Gly Ala Phe Gly Ala His Gly Leu
 20 25 30
 Glu Asp Lys Leu Ser Asp Lys Tyr Met Ser Ile Trp Glu Lys Ala Thr
 35 40 45
 Thr Tyr Gln Met Tyr His Gly Leu Gly Leu Leu Val Ile Gly Leu Ile
 50 55 60
 Ser Gly Thr Ile Ser Ile Asn Val Asn Trp Ala Gly Trp Leu Leu Phe
 65 70 75 80
 Phe Gly Ile Val Phe Phe Ser Gly Ser Leu Tyr Phe Leu Ala Leu Thr
 85 90 95
 Gln Val Arg Ile Leu Gly Ala Ile Thr Pro Ile Gly Gly Val Leu Phe
 100 105 110
 Ile Ile Gly Trp Leu Val Leu Val Ile Ala Thr Leu Lys Phe Ala Gly
 115 120 125

<210> 5444
 <211> 307
 <212> PRT
 <213> S.epidermidis

<400> 5444

Lys Ile Lys Phe Lys His Ile Lys Arg Asn Ile Asn Ser Asp Ile Leu
 1 5 10 15
 Val Lys Asn Met Asn Ser Asp Val Val Gln Lys Ser Val Asp Asn Ala
 20 25 30
 Val Lys Asp Asn Leu Ser His Lys Val Val Lys Asp Ala Met Ser Ile
 35 40 45
 Ile Arg Asn Ile Met Lys Tyr Ile Gln Arg Lys Tyr Lys Leu Thr Asp
 50 55 60
 Ile Ser Tyr Leu Asp Asp Ile Val Ile Pro Lys Lys Ala Thr Thr Arg
 65 70 75 80
 Glu Glu Val Lys Ala Lys Arg Glu Asn Tyr Leu Glu Met Asp Glu Val
 85 90 95
 Lys Ala Ile Val Asp Asn Leu His Glu Ile Ala Asn Ser Lys Arg Ala
 100 105 110
 Asp Tyr Met Lys Arg Ser Phe Ile Met Thr Ala Tyr Ile Met Glu Phe
 115 120 125
 Gln Ala Leu Asn Gly Met Arg Ile Gly Glu Leu Leu Ala Ile Gln Pro
 130 135 140
 Asn Asn Ile Asp Phe Asp Lys Lys Thr Leu Glu Ile Asp Gly Thr Ile
 145 150 155 160
 His Trp Arg Asn Glu Gly Asn Ala Val Gly Phe Lys Asp Thr Thr Lys
 165 170 175
 Thr Glu Ser Ser Tyr Arg Thr Ile Ser Leu Thr Thr Arg Ser Cys Asp
 180 185 190
 Ile Leu Arg Lys Val Met Leu Glu Asn Lys Lys Ala Ile Gln Trp Glu
 195 200 205
 Ser Met Tyr Gln Asp Arg Gly Phe Ile Phe Thr Asn Tyr Arg Gly Asn
 210 215 220
 Pro Met Ser Leu Ser Thr Ile Asn Arg Asn Met Gln Gln Ser Ala Asn
 225 230 235 240
 Asn Val Gly Ile Thr Lys His Ile Thr Ser His Thr Met Arg His Ser
 245 250 255
 His Ile Ser Leu Leu Ser Gln Leu Gly Ile Ser Leu Lys Ala Ile Met
 260 265 270
 Gln Arg Val Gly His Thr Asp His Lys Thr Thr Leu Gln Ile Tyr Ser
 275 280 285
 His Val Thr Asp Gln Met Asp Lys Asp Met Met Asn Lys Leu Glu Lys
 290 295 300
 Val Gly Asn
 305

<210> 5445
 <211> 267
 <212> PRT
 <213> S.epidermidis

<400> 5445

Ile Phe Phe Ser Leu Lys Ser Phe Pro Lys Lys Asn Ser Lys Gln Ile
 1 5 10 15
 Lys Glu Gly Leu Lys Val Asn Glu Leu Gln Thr Phe Asn Phe Glu Asp

		20						25					30				
Cys	Glu	Lys	Val	Phe	Ser	Glu	Leu	Asn	Val	Asn	Trp	Met	Asn	Tyr	Lys		
		35						40				45					
Ile	Lys	Tyr	Leu	Lys	Pro	Ile	Asn	Ile	Asp	Glu	Glu	Val	Gln	Phe	Leu		
	50					55				60							
Ile	Lys	Glu	Asn	Asp	Glu	Ile	Val	Val	Phe	Lys	Thr	Tyr	Asp	Asp	Thr		
65					70					75					80		
Lys	Leu	Thr	Ile	Thr	Arg	Ser											
				85													

<210> 5448

<211> 262

<212> PRT

<213> S.epidermidis

<400> 5448

Ser	Ser	Val	Ser	Tyr	Asn	Cys	His	Val	Ile	Tyr	Asn	Thr	Ile	Val	Tyr		
1				5					10					15			
Val	Thr	Ile	Ile	Asn	Ile	Lys	Ile	Ile	Phe	Arg	Arg	Glu	Leu	Lys	Leu		
			20					25					30				
Glu	Trp	Ile	Leu	Phe	Asp	Lys	Asp	Gly	Thr	Leu	Ile	Glu	Phe	Asp	Ser		
	35					40						45					
Ser	Trp	Glu	Lys	Ile	Gly	Val	Arg	Leu	Val	Asp	Gln	Leu	Leu	Glu	Thr		
	50				55					60							
Phe	Pro	Val	His	Asp	Lys	Glu	Ala	Ala	His	Arg	Gln	Leu	Gly	Ile	Ile		
65				70						75					80		
Asp	Lys	Lys	Ile	Lys	Pro	Asp	Ser	Val	Met	Gly	Ser	Gly	Ser	Leu	Gly		
				85					90					95			
Glu	Ile	Ile	Glu	Ser	Phe	Asn	Gly	Val	Thr	Gly	Lys	Glu	Thr	Ser	Asp		
			100					105					110				
Trp	Thr	Lys	Asp	Thr	Ser	Gln	Glu	Leu	Ile	Asp	Ser	Arg	Val	Pro	Glu		
		115					120					125					
Asn	Asn	Trp	Ile	Asp	Gly	Val	Gln	Glu	Thr	Ile	Gln	Ala	Leu	Arg	Asn		
	130					135					140						
Glu	Gly	Tyr	His	Ile	Gly	Ile	Val	Thr	Ser	Asp	Thr	Lys	Lys	Gly	Val		
					150					155					160		
Asp	Gln	Phe	Leu	Glu	Glu	Thr	Gln	Thr	Arg	Asn	Leu	Phe	Asp	Leu	Val		
				165					170					175			
Ile	Ser	Thr	Glu	Thr	His	Ala	Glu	Glu	Lys	Pro	His	Pro	Lys	Val	Leu		
			180				185						190				
Asp	Pro	Leu	Phe	Asn	Ala	Phe	Asp	Val	Lys	Pro	Glu	Lys	Val	Ala	Ile		
		195					200					205					
Val	Gly	Asp	Thr	Ala	Asn	Asp	Met	Lys	Thr	Ala	Ile	Asn	Ala	His	Leu		
	210					215					220						
Gly	Leu	Ala	Ile	Gly	Val	Leu	Thr	Gly	Val	Ala	Lys	Lys	Glu	Glu	Leu		
	225				230					235					240		
Tyr	Asp	Ala	Asp	Val	Ile	Ile	Asn	Ser	Ala	Lys	Asp	Val	Lys	Gln	Val		
				245					250					255			
Ile	Glu	Gln	Tyr	Gly	Lys												
				260													

<210> 5449

<211> 71

<212> PRT

<213> S.epidermidis

<400> 5449

```

Ser Ser Tyr Ser Ser Arg Tyr Thr Leu Gly Tyr Leu Tyr Arg Leu Asn
1          5          10          15
Asn Phe Phe Lys Ile Lys Pro Leu Thr Ile Asn Tyr Arg Ile Tyr Leu
20          25          30
His Ile Leu Ile Val Val Ile Val Ile Ile Leu Leu Met Tyr Asn Leu
35          40          45
Gln Ser Ile Leu Ile Asn Ile Trp Leu Phe Ile Ile His Thr Ile Asn
50          55          60
Ser Arg Ser Glu Asn Asn Glu
65          70

```

<210> 5450

<211> 102

<212> PRT

<213> S.epidermidis

<400> 5450

```

Val Cys Tyr Ser Ser Ile Lys Ile Asp Asp Gln Thr Lys Lys Tyr Arg
1          5          10          15
Lys Lys Glu Thr Met Ile Met Asp Phe Val Glu Gln Ala Val Lys Glu
20          25          30
Ile Lys Glu Lys Ile Gly Lys Glu Leu Asp Leu Glu Lys Glu Thr Tyr
35          40          45
Leu Leu Gln Thr Pro Ser Ala Tyr Met Gln Ile Gly Leu Glu Glu Asp
50          55          60
Asp Asp Asp Glu Arg Lys Leu Asn Val Gln Val Thr Gly Gly Asn Ile
65          70          75          80
Thr Cys Leu Lys Thr Asp Lys Asp Ile Phe Lys Asp Leu Tyr Val Asn
85          90          95
Asp Asp Glu Asn Asp Asn
100

```

<210> 5451

<211> 511

<212> PRT

<213> S.epidermidis

<400> 5451

```

Ile Met Glu Leu Glu Lys Val Gly Lys Leu Asp Leu Asn Glu Glu Pro
1          5          10          15
Tyr Leu Gln Pro Ile Ser Asn Arg Gly Ile Gly Phe Tyr Asn Leu Asp
20          25          30
Lys Asn Thr Ala Lys Phe Gln Phe Val Val Gln Lys Asp Asn Lys Pro
35          40          45
Leu Leu Ile Ser Asp Lys Asn Val Lys Gly Tyr Ala Phe Phe Lys Ala
50          55          60
Ala Asn Gly Thr Glu Glu Lys Arg Pro Ser Thr Ser Gly Val Leu Asp
65          70          75          80
Val Glu Phe Ile Asp Pro Met Lys Gly Leu Ile Gly Val Thr Val Pro
85          90          95
Gln Trp Phe Leu Lys Asn Val Val Asp Ser Glu Val Leu Gly Glu Ile
100          105          110
Tyr Leu Ser Leu Asn Asp Val Asn Asn Val Gly Lys Asp Asp Thr Val
115          120          125
Val Leu Gly Thr Phe Lys Phe Thr Val Arg Asp Ser Leu Ile Asn Gln

```


Arg Asn Asn Lys Met Ser Asn Leu Glu Gln Asn Ile Lys Gln Met Lys
 20 25 30
 Asn Glu Val Ile Glu Ala Glu Leu Asn Thr Lys Ile Asn Thr Val Ile
 35 40 45
 Thr Met Ile Gly Glu His Met Asp Ser Asn Glu Arg Phe Lys Ser His
 50 55 60
 Leu Asp Ala Gln Gly Lys Val Met Glu Ser Tyr Met Leu Lys Glu Tyr
 65 70 75 80
 Tyr Gln Asn Tyr Tyr Val Leu Met Ala Val Leu Asn Ser Ile Leu Lys
 85 90 95
 Asp Val Asn Phe Met Asn Asp Glu Ile Thr Thr Phe His Asp Arg Ala
 100 105 110
 Leu Asp Glu Leu Asp Lys Thr Lys Ala Ser Ser Glu Asn Phe Gly Glu
 115 120 125
 Glu Ser Leu Asn Ala
 130

<210> 5453

<211> 52

<212> PRT

<213> S.epidermidis

<400> 5453

Asn His Cys Phe Ile Asn Phe Tyr Lys Phe Phe Pro Tyr Thr Ile Thr
 1 5 10 15
 His Tyr Asp Lys Arg Thr Tyr Val Leu Leu Asn Leu Arg Phe Asn Pro
 20 25 30
 Leu Thr Lys Ile Lys His Leu Ala Phe Phe Ser Phe Tyr Ile Gly Ala
 35 40 45
 Thr His Tyr Met
 50

<210> 5454

<211> 69

<212> PRT

<213> S.epidermidis

<400> 5454

Met Asn Asn Asn Gln Phe Lys Val Ile Lys Glu Ile Tyr Asn Thr Leu
 1 5 10 15
 Gln Lys Thr Ile Glu Asp Lys Ser Thr Glu Tyr Lys His Lys Ile Lys
 20 25 30
 Asp Gly Asn Asn Glu Trp Ile Glu Thr Val Asn Arg Glu Glu His Leu
 35 40 45
 Gln Ala Leu Ile Glu Trp Ala Leu Gln Gln Ile Glu Asn Asn Phe Asp
 50 55 60
 Phe Glu Glu Glu Lys
 65

<210> 5455

<211> 60

<212> PRT

<213> S.epidermidis

<400> 5455

Lys Leu Ser Lys Asn Arg Leu Ile Ile Phe Tyr Asn Leu Pro Cys Met

```

1           5           10           15
Leu Leu Leu Phe Ile Ser Ser Glu Glu Gly Ile Thr Pro Phe Ile Leu
                20                25                30
Phe Lys Gly Lys Ser Tyr Arg Val Thr Ile Ile Ile Asn Gln Phe Cys
                35                40                45
Asn Ser Asn Ser Tyr Pro Phe Phe His Lys Met Lys
        50                55                60

```

<210> 5456
 <211> 215
 <212> PRT
 <213> S.epidermidis

```

<400> 5456
Met Asn Met Asn Ile Glu Ile Ile Ala Asn Gln Phe Glu Thr Arg Ala
1           5           10           15
Ala Thr Leu Leu Arg Tyr Tyr Thr Gly Leu Leu Glu Ser Ser Arg Asp
                20                25                30
Asn His Phe Ala Phe Lys Ile Tyr Asn Asp Pro Phe Asp Met Val Tyr
                35                40                45
Val Met Met Asn Gly Lys Leu Phe Gly His Val Tyr Ile Lys Asp Cys
        50                55                60
Lys Val Arg Asn Ser Phe Glu Leu Ala Ser Ser Lys His Thr Glu Gly
        65                70                75                80
Gln Ile Arg Ser Ile Glu Gly Tyr Tyr Asn Gly Phe Glu Ile His Asp
                85                90                95
Asp Lys His Leu Ser Ile Ser Asp Met Met Ala Arg Gln Leu Phe Glu
                100               105               110
Asp Glu Tyr Phe Met Tyr Gly Leu Glu Thr Phe Ala Glu Ser Asn Asn
        115               120               125
Thr Asp Met Phe Thr Tyr Ile Glu Gly Gly Leu Asn Val Glu Glu Leu
        130               135               140
Glu Gly Val Gln Ser Ser Asn Ala Asp Val Ile Gly Asn Ile Glu Ile
        145               150               155               160
Leu Tyr Gln Leu Ala Thr Gly Ile Asn Glu Pro Ala Ser Glu Leu Val
                165               170               175
Glu Ser Leu Lys Leu Val Thr Ala Phe Val Gln Asp Glu Asn Ala Thr
                180               185               190
Gln Asp Asp Tyr Lys Thr Leu Glu Arg Lys Leu Ser Glu Leu Lys Thr
                195               200               205
Ser Tyr Tyr Ser Val Ser Lys
        210                215

```

<210> 5457
 <211> 291
 <212> PRT
 <213> S.epidermidis

```

<400> 5457
Lys Leu Ser Glu Ile Lys Leu Glu Tyr Asp Thr Gln Val Ser Val Ile
1           5           10           15
Trp Tyr Gly Thr Leu Asp Ser Arg Ser Phe Lys Gln Phe Ser Gln Pro
        20                25                30
Lys Trp Ser Glu Leu Val Asn Arg Leu Ser Ile Pro Gln Asn Asn Thr
        35                40                45
Asn Lys Tyr Ala Arg Gly Val Ala Val Tyr Gly Asp Met Lys Asp Asp

```


50 55 60
 Thr Asp Glu Asn Gly Asn Glu Tyr Lys Lys Tyr Arg Lys Asp Gly Asn
 65 70 75 80
 Val Ile Tyr Arg Asp Val Leu Val Leu Asp Tyr Asp Asp Ile Pro Lys
 85 90 95
 Leu Arg Leu Leu His Asp Ala Ile Thr Glu Thr Leu Lys Gly Val Ser
 100 105 110
 Trp Met Tyr His Thr Thr Phe Asn His Arg Thr Glu Ser Pro Arg Ile
 115 120 125
 Arg Leu Tyr Ile Ala Leu Ser Glu Arg Ile Ser Ala Asp Asp Tyr Arg
 130 135 140
 Lys Tyr Thr Lys Val Leu Ala Asn Lys Ile Gly His Leu Val Asp Glu
 145 150 155 160
 Gly Ser Phe Gln Pro Ser Arg Ala Met Ala Leu Pro Val Tyr Ile Lys
 165 170 175
 Gly Lys His Pro Phe Leu His Gln Tyr Asn Asp Ala Pro Ile Leu Asn
 180 185 190
 Val Glu Met Leu Glu Lys Trp Ser Lys Glu Thr Asn Ile Gln Thr Asp
 195 200 205
 Gln Pro Ser Lys Thr Asn Phe Asn Lys Arg Asp Asp Thr Tyr Trp Arg
 210 215 220
 Asp Ile Ser Phe Ser Val Thr Lys Gly Asn Arg Asn Asn Ser Leu Ala
 225 230 235 240
 Ser Leu Ile Gly His Leu Phe Ser Arg His Val Asn Glu Tyr Ile Val
 245 250 255
 Tyr Ser Tyr Ala Leu Leu Trp Gly Gln Asn Ala Cys Asn Pro Pro Leu
 260 265 270
 Asn Glu Arg Glu Ile Asn Ala Thr Phe Gln Ser Ile Leu Lys Lys His
 275 280 285
 Arg Asn Lys
 290

<210> 5458
 <211> 54
 <212> PRT
 <213> S.epidermidis

<400> 5458
 Ser Pro Val Ser Pro His Leu Ile Phe Ile Ser Gly Tyr Ser Gln Thr
 1 5 10 15
 Leu Val Thr Ala Ala Phe Asn Glu Phe Ser Thr Arg Cys Thr Arg Ile
 20 25 30
 Phe Tyr Asn Arg Lys Pro Val Leu Tyr Glu Tyr Ser Tyr Lys Gln Leu
 35 40 45
 Thr Leu Ile Lys Cys His
 50

<210> 5459
 <211> 145
 <212> PRT
 <213> S.epidermidis

<400> 5459
 Lys Leu Ser Gly Asp Ser Leu Gly Thr Ser Thr His Phe Glu Lys Ile
 1 5 10 15
 Leu Lys Lys Phe Trp Arg Leu His Met Asp Lys Glu Gln Leu Lys Gln

```
<210> 5460
<211> 575
<212> PRT
<213> S.epidermidis
```

<400>	5460														
Val 1	Glu	Arg	Gly	Lys 5	Tyr	Met	Glu	Leu	Thr 10	Lys	Asp	Asp	Ile	Leu 15	His
Glu	Ile	Glu	Lys 20	Thr	Lys	Gln	Glu	Lys 25	Asp	Ala	Ile	His	Glu 30	Val	Ile
Pro	Lys	Gly	Tyr	Glu	Ile	Glu	Gln 40	His	Gln	Asn	Gly	Val 45	Ala	Leu	Tyr
Gln	Ile 50	Ile	Pro	Ser	Lys	Lys 55	Asp	Gly	Glu	Pro	Asp 60	Lys	Lys	Ile	Phe
Ile 65	Thr	Asn	Thr	Ile 70	Pro	Gln	Ile	Thr	Glu	Arg 75	Phe	Glu	Asp	Ile	Glu 80
Ser	Asn	Glu	Val	Ser 85	Tyr	Asn	Met	Leu	Phe 90	Tyr	Asp	Asn	Gln	Ile 95	Pro
Val	Asn	Leu	Gly 100	Val	Ser	Ala	Glu	Glu 105	Ile	Ala	Asp	Ser	Arg	Gln	Leu
Leu	Lys	Leu 115	Val	Asn	Arg	Lys	Phe 120	Asp	Val	Thr	Ser	Thr 125	Thr	Ser	Thr
Arg	Leu 130	Val	Asp	Tyr	Ile	Asn 135	Lys	Ser	Lys	Arg	His 140	Asn	Pro	Pro	Val
Asn 145	Ile	Lys	Val	Ala	Thr	Arg	Leu	Gly	His	Val 155	Lys	Gly	Tyr	Phe	Ile 160
Tyr	Pro	Tyr	Lys	Glu 165	Glu	Met	Lys	Asn	Arg	Asn 170	Ile	Lys	Leu	Phe	Asn 175
Asn	Asp	Lys	Gly 180	Phe	Gln	Lys	Leu	Ile 185	Asp	Ser	Phe	Gln	Ser	Lys	Gly 190
Thr	Leu	Glu	Ser	Tyr	Ser	Glu	His 200	Val	Phe	Ser	Lys	Ile 205	Lys	Ser	Leu
Pro	Met 210	Val	Met	Val	Met	Leu 215	Tyr	Ala	Ser	Leu	Gly 220	Ser	Val	Leu	Leu
Arg 225	Glu	Phe	Glu	Leu	Gln 230	Pro	Phe	Ile	Val	Glu 235	Ile	Ser	Gly	Ser	Thr 240
Ser	Thr	Gly	Lys	Thr 245	Phe	Thr	Leu	Asn	Leu	Val 250	Ser	Ser	Val	Trp	Gly 255

<210> 5462
 <211> 53
 <212> PRT
 <213> S.epidermidis

<400> 5462
 Leu Tyr Tyr Ser Lys Phe Thr Leu Lys Thr Gln Thr Tyr Val Leu Val
 1 5 10 15
 Leu Thr His Phe Ile Leu Cys Leu Thr Thr Leu Lys Ile Ile Val Leu
 20 25 30
 Ser Thr Phe Ile Ser Phe Phe His Ile Leu Ser His Thr Met Ile Lys
 35 40 45
 Glu Arg Met Phe Cys
 50

<210> 5463
 <211> 45
 <212> PRT
 <213> S.epidermidis

<400> 5463
 Pro Ser Cys Ser Asn Leu Glu Ile Ile Glu Ser Ile Glu Ser Arg Asp
 1 5 10 15
 Ile Leu Ala Arg Thr Val Val Val Thr Gly Ser Lys Lys Asp Arg Ala
 20 25 30
 Met Phe Ser Val Phe Ser Thr Pro Lys Cys Val Thr Gln
 35 40 45

<210> 5464
 <211> 61
 <212> PRT
 <213> S.epidermidis

<400> 5464
 Asp Leu Ile Ser Val Glu Leu Tyr Tyr Cys Thr Leu Glu Asn Lys Lys
 1 5 10 15
 Gly Ala Ser Phe Asn Glu Thr Pro Phe Cys Tyr Ser Val Leu Gly Gly
 20 25 30
 Ile Arg Thr Pro Asp Arg Trp Leu Arg Arg Pro Leu Leu Tyr Pro Ala
 35 40 45
 Glu Leu Pro Gly His Phe Gln His Lys Asn Tyr Tyr Ile
 50 55 60

<210> 5465
 <211> 48
 <212> PRT
 <213> S.epidermidis

<400> 5465
 Glu Thr Ile Ser Pro Ala Ser Lys Leu Arg Phe Asn Pro Pro Lys Val
 1 5 10 15
 Glu Ala Gln Asn Val Gln Pro Ile Leu His Pro Thr Cys Val Val Thr
 20 25 30
 Gln Thr Glu Phe Pro Tyr Ser Cys Leu Ile Lys Thr Val Ser Ile Val
 35 40 45

<210> 5466
 <211> 220
 <212> PRT
 <213> S.epidermidis

<400> 5466

```

Asn Ser Ser Ser Leu Gln Thr Phe Lys Ile Phe Lys Ser Ser Ile Cys
1      5      10      15
Asn Asn Lys Thr Leu Ile Phe Tyr Lys Tyr Gly Tyr Lys Ser Leu Leu
20      25      30
Lys Phe Tyr Leu Lys Gly Cys His Tyr Met Gly Ile Arg Ser Lys Leu
35      40      45
Thr Asn Asn Ile Thr Asn Lys Val Gly Asn Ser Leu Leu Asn Ile Glu
50      55      60
Glu Ile Lys Glu Lys Gly Asp Leu Pro Thr Thr Gln Glu Glu Leu Arg
65      70      75      80
Gln Arg Arg Glu Arg Ala Glu Thr Leu Val Lys Lys Lys Ser Leu Leu
85      90      95
Ser Ser Gly Ala Ser Ile Val Pro Ile Pro Gly Leu Asp Phe Gly Val
100     105     110
Asp Leu Lys Leu Met Arg Asp Ile Ile Glu Asp Val Asn Lys Ile Tyr
115     120     125
Gly Leu Asp His Asp Gln Val Asn Ser Leu Ser Asp Gln Val Lys Glu
130     135     140
Arg Ile Met Ser Ala Ala Ile Gln Gly Ser Gln Phe Ile Gly Arg
145     150     155     160
Lys Val Ser Glu Ala Leu Leu Lys Val Val Ile Lys Asp Val Ala Lys
165     170     175
Arg Ala Ala Ala Lys Gln Thr Lys Trp Phe Pro Phe Val Gly Gln Ala
180     185     190
Val Ser Ala Ser Ile Ser Tyr Tyr Phe Met Ser Lys Leu Gly Lys Asp
195     200     205
His Ile Asn Lys Cys Glu Lys Val Ile Asn Asn Leu
210     215     220

```

<210> 5467
 <211> 47
 <212> PRT
 <213> S.epidermidis

<400> 5467

```

Lys Phe Thr Ser Leu Ile Gly Phe Leu Phe Thr Gln Met Phe Tyr Pro
1      5      10      15
Val Ile Leu Leu Ile Asn Val Cys Arg Thr Ile Asp Val Phe His Asp
20      25      30
Ile Leu Lys Thr Ile Lys Arg Ser Ser Tyr Ile Ile Ile Leu Arg
35      40      45

```

<210> 5468
 <211> 60
 <212> PRT
 <213> S.epidermidis

<400> 5468

```

Ile Asn Asp Ser Asn Arg Phe Ile His Thr Ser Ser Pro Leu Phe Leu
1      5      10      15

```

Gln Leu Pro Tyr Ile Val Ser Gln Tyr His Ile Thr Val Asp Ile Tyr
 20 25 30
 Val Tyr Ser Ser Cys Lys Val Ile Phe Leu Ser Leu Phe Tyr Asn His
 35 40 45
 Gln Lys Met Thr Lys Ala Arg Leu Pro Trp Ser Leu
 50 55 60

<210> 5469

<211> 357

<212> PRT

<213> S.epidermidis

<400> 5469

Met Lys Arg Phe Phe Gln Leu Ile Ile Ser Ala Ile Val Ile Gly Ile
 1 5 10 15
 Leu Cys Leu Met Ile Ser His Trp Phe Lys Ser Lys Asp Asn Thr His
 20 25 30
 Ser Asn Glu Lys Leu Tyr Val Tyr Asn Trp Gly Glu Tyr Ile Asp Pro
 35 40 45
 Ser Leu Ile Lys Lys Phe Glu Lys Glu Thr Gly Ile Gln Val Val Tyr
 50 55 60
 Glu Thr Phe Asp Ser Asn Glu Ala Met Glu Ala Lys Ile Arg Asn Gly
 65 70 75 80
 Gly Thr His Tyr Asp Val Ala Phe Pro Ser Glu Tyr Thr Val Gln Lys
 85 90 95
 Leu Lys Lys Ala Lys Leu Leu Glu Thr Leu Asn His Asp Lys Ile Pro
 100 105 110
 Asn Ile Arg Asn Leu Asp Asn Asp Tyr Met Asn Leu Ser Tyr Asp Pro
 115 120 125
 Asn Asn Arg Tyr Ser Ile Pro Tyr Phe Phe Gly Thr Val Gly Ile Leu
 130 135 140
 Tyr Asp Lys Glu Lys Tyr Pro Asn Glu Thr Phe Asp Ser Trp Asp Asp
 145 150 155 160
 Leu Tyr His Ser Gln Phe Lys Asn Asp Ile Leu Leu Val Asp Gly Ala
 165 170 175
 Arg Glu Ile Ile Gly Met Gly Leu Asn Lys Leu Gly Tyr Ser Leu Asn
 180 185 190
 Asp Lys Asn Pro Thr His Ile Tyr Gln Ala Glu Lys Asp Leu His Asn
 195 200 205
 Leu Ala Pro Gln Val Arg Gly Ile Val Gly Asp Glu Ile Thr Met Met
 210 215 220
 Leu Gln Gln Asn Glu Gly His Val Ala Val Val Trp Ser Gly Val Ala
 225 230 235 240
 Ala Pro Leu Val Gln Glu Asn Thr Arg Tyr Asn Tyr Val Ile Pro Lys
 245 250 255
 Glu Gly Ser Asn Leu Trp Phe Asp Asn Met Val Ile Pro Lys Thr Ala
 260 265 270
 Gln Asn Lys Glu Gly Ala Tyr Lys Phe Met Asn Phe Leu Leu Asp Ala
 275 280 285
 Gln Asn Ser Ala Gln Asn Thr Glu Trp Val Gly Tyr Ala Thr Pro Asn
 290 295 300
 Lys Ala Ala Arg Ser Lys Leu Pro Lys Lys Val Arg Asn Asp Tyr Arg
 305 310 315 320
 Phe Tyr Pro Ser Asn Gln Glu Gln Gln Arg Leu Glu Val Tyr Lys Asp
 325 330 335
 Leu Gly Gln Thr Ser Leu Ser Glu Tyr Asn Glu Ser Phe Leu Asn Phe

340
Lys Met Ser Leu Lys
355

345

350

<210> 5470
<211> 318
<212> PRT
<213> S.epidermidis

<400> 5470

Phe Thr Ile Ser Leu Tyr Tyr Met Arg Asn Leu Arg Arg Gly Ile Met
1 5 10 15
Asn Lys Asp Gln Thr Leu Ser His Thr Thr Gly Arg Val Ser Phe Lys
20 25 30
Glu Leu Gln Gln Ile Ile Lys Met Ala Leu Val Gln Gly Asn Leu Ile
35 40 45
Pro Ala Phe Ala Gly Ala Trp Leu Ala Ile Val Met Thr Asn His Ser
50 55 60
Phe Leu Ser Ser Ile Pro Gln Ile Leu Leu Met Leu Val Gly Ser Thr
65 70 75 80
Leu Ile Met Gly Gly Ala Cys Ala Leu Asn Asn Tyr Tyr Asp Gln Asp
85 90 95
Ile Asp Arg Ile Met Pro Ser Lys Gln Ser Arg Pro Thr Val Asn Asp
100 105 110
Arg Ile Ser Asp Arg Asn Leu Leu Met Leu Ser Phe Gly Met Met Leu
115 120 125
Ile Gly Glu Ala Cys Leu Phe Leu Leu Asn Ile Pro Ser Gly Val Leu
130 135 140
Gly Leu Ile Gly Ile Val Gly Tyr Val Ser Tyr Tyr Ser Ile Trp Ser
145 150 155 160
Lys Arg His Thr Thr Trp Asn Thr Val Val Gly Ser Phe Pro Gly Ala
165 170 175
Val Pro Pro Leu Ile Gly Trp Val Ala Ile Asp Gly Ser Leu Ser Leu
180 185 190
Ala Ala Val Ala Leu Phe Leu Val Val Phe Cys Trp Gln Pro Ile His
195 200 205
Phe Tyr Ala Leu Ala Ile Lys Arg Ser Asp Glu Tyr Ala Leu Ala Asn
210 215 220
Ile Pro Met Leu Pro Ser Val Lys Gly Phe Lys Arg Thr Arg Val Ser
225 230 235 240
Met Phe Ile Trp Leu Val Leu Leu Leu Pro Leu Pro Phe Leu Leu Ser
245 250 255
Asn Leu Gly Val Thr Phe Val Val Ile Ala Thr Leu Leu Asn Leu Gly
260 265 270
Trp Leu Ala Leu Gly Phe Thr Thr Phe Arg Lys Glu Ser Asn Gln Thr
275 280 285
Lys Trp Ala Thr Gln Met Phe Val Tyr Ser Leu Asn Tyr Leu Val Val
290 295 300
Phe Phe Ala Leu Val Val Val Val Ser Leu Ile Lys Met Ile
305 310 315

<210> 5471
<211> 457
<212> PRT
<213> S.epidermidis

<400> 5471

Val Tyr Gly Leu Glu Cys Ile Lys Leu Leu Asn Tyr Thr Glu Leu Glu
 1 5 10 15
 Asn Lys Asn Val Leu Val Val Gly Leu Ala Lys Ser Gly Tyr Glu Ala
 20 25 30
 Ala Lys Leu Leu Leu Lys Leu Gly Ala Asn Val Lys Val Asn Asp Gly
 35 40 45
 Lys Asp Leu Ser Gln Asp Ala His Ala Lys Asp Leu Glu Ser Met Gly
 50 55 60
 Ile Glu Val Ile Ser Gly Ser His Pro Phe Ser Leu Leu Asp Asp Asp
 65 70 75 80
 Pro Ile Ile Val Lys Asn Pro Gly Ile Pro Tyr Thr Val Ser Ile Ile
 85 90 95
 Lys Glu Ala Ala Asn Arg Gly Leu Lys Ile Leu Thr Glu Val Glu Leu
 100 105 110
 Ser Tyr Leu Ile Ser Glu Ala Pro Ile Ile Ala Val Thr Gly Thr Asn
 115 120 125
 Gly Lys Thr Thr Val Thr Ser Leu Ile Gly Asp Met Phe Gln Lys Ser
 130 135 140
 Val Leu Thr Gly Arg Leu Ser Gly Asn Ile Gly Tyr Val Ala Ser Lys
 145 150 155 160
 Val Ala Gln Glu Val Lys Ser Asp Glu Tyr Leu Ile Thr Glu Leu Ser
 165 170 175
 Ser Phe Gln Leu Leu Gly Ile Glu Glu Tyr Lys Pro His Ile Ala Ile
 180 185 190
 Ile Thr Asn Ile Tyr Ser Ala His Leu Asp Tyr His Glu Thr Leu Glu
 195 200 205
 Asn Tyr Gln Asn Ala Lys Lys Gln Ile Tyr Lys Asn Gln Thr Lys Asp
 210 215 220
 Asp Tyr Leu Ile Cys Asn Tyr His Gln Arg His Leu Ile Glu Ser Glu
 225 230 235 240
 Asn Leu Glu Ala Lys Thr Phe Tyr Phe Ser Thr Gln Gln Glu Val Asp
 245 250 255
 Gly Ile Tyr Ile Lys Asp Gly Phe Ile Val Phe Asn Gly Ile Arg Ile
 260 265 270
 Ile Asn Thr Lys Asp Leu Val Leu Pro Gly Glu His Asn Leu Glu Asn
 275 280 285
 Ile Leu Ala Ala Val Leu Ala Ser Ile Ile Ala Gly Val Pro Val Lys
 290 295 300
 Ala Ile Val Asp Ser Leu Val Thr Phe Ser Gly Ile Asp His Arg Leu
 305 310 315 320
 Gln Tyr Ile Gly Thr Asn Arg Thr Asn Lys Tyr Tyr Asn Asp Ser Lys
 325 330 335
 Ala Thr Asn Thr Leu Ala Thr Gln Phe Ala Leu Asn Ser Phe Asp Gln
 340 345 350
 Pro Ile Ile Trp Leu Cys Gly Gly Leu Asp Arg Gly Asn Glu Phe Asp
 355 360 365
 Glu Leu Ile Pro Tyr Met Glu Asn Val Arg Val Met Val Val Phe Gly
 370 375 380
 Glu Thr Gln Asp Lys Phe Ala Lys Leu Gly Asn Ser Gln Gly Lys Tyr
 385 390 395 400
 Val Ile Lys Ala Thr Asp Val Glu Asp Ala Val Asp Lys Ile Gln Asp
 405 410 415
 Ile Val Glu Pro Asn Asp Val Val Leu Leu Ser Pro Ala Cys Ala Ser
 420 425 430
 Trp Asp Gln Tyr His Thr Phe Glu Glu Arg Gly Glu Lys Phe Ile Asp

435 440 445
 Arg Phe Arg Ala His Leu Pro Ser Tyr
 450 455

<210> 5472
 <211> 60
 <212> PRT
 <213> S.epidermidis

<400> 5472
 Val Leu Lys Ser Leu Gly Asn Pro Ile Thr Ser Phe Ile Ser Tyr Thr
 1 5 10 15
 Ile Leu Phe Trp Ala Asn Val Phe Phe Ile Thr Phe Leu Asn Ala Leu
 20 25 30
 Arg Glu Asn Ala Leu Glu Phe Val His Asn Ser Asn Val Pro Pro Gly
 35 40 45
 Asp Lys Met Leu Arg Ala Pro Ser Ile Asn Lys Leu
 50 55 60

<210> 5473
 <211> 413
 <212> PRT
 <213> S.epidermidis

<400> 5473
 Val Lys Phe Leu Ala Ser Gln Leu Phe Lys Gly Gly Phe Phe Ile Asp
 1 5 10 15
 Tyr Leu Gly Val Asp Ile Ser Lys Arg Ser Ser Val Val Ala His Tyr
 20 25 30
 Lys Asn Gly Lys Phe Gln Lys Glu Phe Phe Ile Gln Asn Asn Lys Asn
 35 40 45
 Gly Tyr Asn Tyr Leu Leu Lys Tyr Leu Asn Asp Leu His His Pro Gln
 50 55 60
 Leu Ile Phe Glu Ser Thr Gly Ile Tyr Ser Arg Gly Met Gln Arg Phe
 65 70 75 80
 Cys Cys Val Asn Gln Ile Asn Tyr Ile Gln Met Asn Pro Leu Glu Ala
 85 90 95
 Lys Phe Lys Thr Ser Thr Leu Arg Ser Trp Lys Thr Asp Gln Ala Asp
 100 105 110
 Ala His Lys Leu Ala Cys Leu Gly Pro Thr Leu Lys Gln Thr Gly Asn
 115 120 125
 Leu Pro Ile His Glu Leu Ile Phe Phe Glu Leu Arg Glu Arg Val Arg
 130 135 140
 Phe His Leu Glu Ile Glu Asn Glu Gln Asn Arg Leu Lys Phe Gln Ile
 145 150 155 160
 Leu Glu Leu Leu His Gln Thr Phe Pro Gly Leu Glu Arg Leu Phe Ser
 165 170 175
 Ser Arg Tyr Ser Ile Ile Ala Leu Asn Ile Ala Glu Ile Phe Thr His
 180 185 190
 Pro Asp Met Val Leu Asp Ile Asp Lys Asp Val Leu Ile Thr His Ile
 195 200 205
 Phe Asn Ser Thr Asp Lys Gly Met Ser Met Asp Lys Ala Thr Lys Tyr
 210 215 220
 Ala Leu Gln Leu Arg Val Ile Ala Gln Glu Ser Tyr Pro Asn Val Asp
 225 230 235 240
 Arg His Ser Phe Leu Val Glu Lys Leu Arg Leu Leu Ile Gln Gln Leu

2261 5472 5473

				245					250					255			
Lys	Gln	Ser	Ile	His	His	Leu	Lys	Gln	Leu	Asp	Asp	Ala	Met	Ile	Gln		
			260					265					270				
Leu	Ala	Gln	Gln	Leu	Asp	Tyr	Phe	Glu	Asn	Ile	His	Ser	Ile	Pro	Gly		
		275					280					285					
Ile	Gly	Lys	Leu	Ser	Thr	Ala	Met	Ile	Ile	Gly	Glu	Ile	Gly	Asp	Ile		
	290					295					300						
Lys	Arg	Phe	Lys	Ser	Asn	Lys	Gln	Leu	Asn	Ala	Phe	Val	Gly	Ile	Asp		
305					310					315					320		
Ile	Lys	Arg	Tyr	Gln	Ser	Gly	His	Thr	His	Cys	Arg	Asp	Thr	Ile	Asn		
				325					330					335			
Lys	Arg	Gly	Asn	Lys	Lys	Ala	Arg	Lys	Leu	Leu	Phe	Trp	Val	Ile	Met		
			340					345					350				
Asn	Ile	Ile	Arg	Gly	Gln	His	His	Tyr	Asp	Asn	His	Val	Val	Asp	Tyr		
		355					360					365					
Tyr	Tyr	Lys	Leu	Arg	Lys	Gln	Pro	Asn	Glu	Lys	Pro	His	Lys	Thr	Ala		
	370					375					380						
Ile	Ile	Ala	Cys	Ile	Asn	Arg	Leu	Leu	Lys	Thr	Ile	His	Tyr	Leu	Val		
385					390					395					400		
Met	Asn	His	Lys	Leu	Tyr	Asp	Tyr	Gln	Met	Ser	Pro	His					
				405				410									

<210> 5474

<211> 574

<212> PRT

<213> S.epidermidis

<400> 5474

Ile	Ile	Met	Ser	Lys	Leu	Ile	Lys	Gly	Ile	Ala	Ala	Ser	Asp	Gly	Val		
1				5				10						15			
Ala	Ile	Ala	Lys	Ala	Tyr	Leu	Ile	Val	Glu	Pro	Asp	Leu	Ser	Tyr	Asp		
			20					25					30				
Ser	Asn	Glu	Lys	Val	Thr	Asp	Ile	Glu	Ser	Glu	Val	Glu	Lys	Phe	Asn		
		35					40					45					
Asp	Ala	Ile	Glu	Ala	Ser	Lys	Ile	Glu	Leu	Thr	Lys	Ile	Arg	Asn	Asn		
	50					55					60						
Ala	Glu	Ala	Gln	Leu	Gly	Ala	Asp	Lys	Ala	Ala	Ile	Phe	Asp	Ala	His		
65					70				75					80			
Leu	Leu	Val	Leu	Asp	Asp	Pro	Glu	Leu	Ile	Gln	Pro	Ile	Gln	Asp	Lys		
				85				90					95				
Ile	Arg	Asn	Asp	Lys	Val	Asn	Ala	Ala	Thr	Gly	Leu	Asp	Glu	Val	Thr		
		100						105					110				
Thr	Gln	Phe	Ile	Ser	Ile	Phe	Glu	Ser	Met	Asp	Asn	Glu	Tyr	Met	Lys		
	115						120					125					
Glu	Arg	Ala	Ala	Asp	Ile	Arg	Asp	Val	Ser	Lys	Arg	Val	Leu	Ala	His		
	130					135					140						
Ile	Leu	Gly	Val	Asp	Leu	Pro	Asn	Pro	Ser	Leu	Ile	Asn	Glu	Ser	Ala		
145					150					155				160			
Val	Ile	Val	Gly	Asn	Asp	Leu	Thr	Pro	Ser	Asp	Thr	Ala	Gln	Leu	Asn		
				165				170					175				
Lys	Glu	Phe	Val	Gln	Gly	Phe	Val	Thr	Asn	Ile	Gly	Gly	Arg	Thr	Ser		
			180					185					190				
His	Ser	Ala	Ile	Met	Ser	Arg	Ser	Leu	Glu	Ile	Ala	Ala	Val	Val	Gly		
	195						200					205					
Thr	Lys	Ser	Ile	Thr	Glu	Glu	Val	Lys	Gln	Gly	Asp	Met	Ile	Ile	Val		
	210					215					220						

Asp Gly Met Ser Gly Asp Val Ile Ile Asp Pro Thr Glu Asp Glu Leu
 225 230 235 240
 Ile Ala Tyr Gln Asn Lys Arg Glu Arg Phe Phe Glu Asp Lys Lys Glu
 245 250 255
 Leu Gln Lys Leu Arg Asp Ala Asp Thr Val Thr Val Asp Gly Val His
 260 265 270
 Ala Glu Leu Ala Ala Asn Ile Gly Thr Pro Asp Asp Leu Ser Gly Val
 275 280 285
 Ile Asp Asn Gly Ala Gln Gly Ile Gly Leu Tyr Arg Thr Glu Phe Leu
 290 295 300
 Tyr Met Gly Arg Asp Gln Met Pro Thr Glu Glu Gln Phe Glu Ala
 305 310 315 320
 Tyr Lys Lys Val Leu Glu Thr Met Asp Gly Lys Arg Val Val Val Arg
 325 330 335
 Thr Leu Asp Ile Gly Gly Asp Lys Glu Leu Pro Tyr Leu Asp Leu Pro
 340 345 350
 Lys Glu Met Asn Pro Phe Leu Gly Tyr Arg Ala Ile Arg Leu Cys Leu
 355 360 365
 Ala Gln Pro Glu Ile Phe Arg Pro Gln Leu Arg Ala Leu Leu Arg Ala
 370 375 380
 Ser Val Tyr Gly Lys Leu Asn Ile Met Phe Pro Met Val Ala Thr Ile
 385 390 395 400
 Lys Glu Phe Arg Asp Ala Lys Ser Met Leu Leu Glu Glu Lys Glu Asn
 405 410 415
 Leu Leu Arg Glu Gly Tyr Glu Val Ser Asp Asp Ile Glu Leu Gly Ile
 420 425 430
 Met Val Glu Ile Pro Ala Thr Ala Ala Leu Ala Asp Val Phe Ala Lys
 435 440 445
 Glu Val Asp Phe Phe Ser Ile Gly Thr Asn Asp Leu Ile Gln Tyr Thr
 450 455 460
 Leu Ala Ala Asp Arg Met Ser Glu Arg Val Ser Tyr Leu Tyr Gln Pro
 465 470 475 480
 Tyr Asn Pro Ser Ile Leu Arg Leu Val Lys Gln Val Ile Glu Ala Ser
 485 490 495
 His Lys Glu Gly Lys Trp Thr Gly Met Cys Gly Glu Met Ala Gly Asp
 500 505 510
 Gln Thr Ala Val Pro Leu Leu Leu Gly Leu Gly Leu Asp Glu Phe Ser
 515 520 525
 Met Ser Ala Thr Ser Ile Leu Lys Ala Arg Arg Gln Ile Asn Gly Leu
 530 535 540
 Ser Lys Asn Glu Met Ala Glu Leu Ala Asn Arg Ala Val Glu Cys Ser
 545 550 555 560
 Thr Gln Glu Glu Val Val Asp Leu Val Asn Gln Leu Ala Lys
 565 570

<210> 5475

<211> 684

<212> PRT

<213> S.epidermidis

<400> 5475

Phe Ile Met Ser Lys Val His Leu Ile Glu Ser Pro Tyr Ala Leu Asp
 1 5 10 15
 Lys Ile Lys Gly Ile Gly Pro Lys Arg Leu Ala Leu Leu Glu Glu Leu
 20 25 30
 Asn Ile Lys Ser Val Glu Asp Leu Val Leu Tyr Leu Pro Thr Arg Tyr

485 490 495
 Tyr Glu Ser Leu Gln Ser Asp Tyr Gly Asn Glu Lys Val Gly Leu Leu
 500 505 510
 His Gly Lys Met Ser Ala Glu Asp Lys Asp Gln Val Met Gln Lys Phe
 515 520 525
 Ser Glu His Glu Ile Asp Ile Leu Val Ser Thr Thr Val Val Glu Val
 530 535 540
 Gly Val Asn Val Pro Asn Ala Thr Phe Met Met Ile Tyr Asp Ala Asp
 545 550 555 560
 Arg Phe Gly Leu Ser Thr Leu His Gln Leu Arg Gly Arg Val Gly Arg
 565 570 575
 Ser Glu His Gln Ser Tyr Cys Val Leu Ile Ala Ser Pro Lys Thr Glu
 580 585 590
 Thr Gly Ile Glu Arg Met Thr Ile Met Thr Gln Thr Thr Asp Gly Phe
 595 600 605
 Glu Leu Ser Glu Arg Asp Leu Glu Met Arg Gly Pro Gly Asp Phe Phe
 610 615 620
 Gly Val Lys Gln Ser Gly Leu Pro Asp Phe Leu Val Ala Asn Val Val
 625 630 635 640
 Glu Asp Tyr Arg Met Leu Glu Val Ala Arg Asp Glu Ala Ala Glu Leu
 645 650 655
 Ile Gln Ser Gly Gln Phe Phe Glu Gln Gln Tyr Ser His Leu Arg Glu
 660 665 670
 Phe Ile Lys Gln Asn Leu Arg His Ile Arg Phe Asp
 675 680

<210> 5476

<211> 350

<212> PRT

<213> S.epidermidis

<400> 5476

Ile Tyr Leu Phe Phe Ile Asp Ser Phe Pro Pro Tyr Tyr Val Lys Ser
 1 5 10 15
 Leu Arg Leu Lys Ser Leu Arg Leu Phe Leu Phe Arg Tyr Arg Asn Asn
 20 25 30
 Pro Ile Pro Cys Tyr Ala Leu Ile Ile Met Lys Tyr Gly Asp Asp Asp
 35 40 45
 Met Ser Ile Pro Ile Ile Ile Asp Thr Asp Pro Gly Ile Asp Asp Ala
 50 55 60
 Thr Ala Ile Ser Ile Ala Leu Ser His Pro Gln Phe Asp Val Lys Met
 65 70 75 80
 Ile Ser Thr Val Asn Gly Asn Val Gly Ile Glu Lys Thr Thr Ala Asn
 85 90 95
 Ala Leu Lys Leu Lys Arg Phe Phe Asn Ser Ser Val Pro Val His Arg
 100 105 110
 Gly Ala Ser Gln Pro Leu Ile Asn Asp Ile Phe Glu Ala Thr Ser Ile
 115 120 125
 His Gly Glu Ser Gly Met Asp Gly Tyr Glu Phe Pro Gln Ile Asn Gln
 130 135 140
 Asp Asp Leu Thr Ser Ile His Ala Val Glu Ala Met Arg Asn Leu Leu
 145 150 155 160
 Val Asn Thr Gln Glu Pro Leu Thr Leu Ile Ala Ile Gly Pro Leu Thr
 165 170 175
 Asn Ile Ala Ile Leu Leu Thr Ser Tyr Pro Glu Val Gln Pro Phe Ile
 180 185 190

Lys Glu Ile Val Leu Met Gly Gly Ser Thr Gly Arg Gly Asn Val Thr
 195 200 205
 Pro Leu Ala Glu Phe Asn Ile Tyr Cys Asp Pro Glu Ala Ala Gln Ile
 210 215 220
 Val Phe Asn Ser Gly Leu Pro Leu Thr Met Ile Gly Leu Asp Leu Ala
 225 230 235 240
 Arg Glu Ala Leu Phe Thr His His Phe Val Lys Asp Phe Lys Asp Thr
 245 250 255
 Asn Ala Thr Ser Asn Met Leu Tyr Asn Leu Phe Gln His Tyr Lys Ser
 260 265 270
 Glu Asp Phe Glu Ile Gly Phe Lys Leu Tyr Asp Val Phe Thr Ile Leu
 275 280 285
 Tyr Leu Leu Asp Pro Glu Ala Phe Asn Val Lys Glu Ala Tyr Thr Gln
 290 295 300
 Ile Glu Leu Asn Gly Asn Phe Thr Arg Gly Ala Thr Val Val Asp Phe
 305 310 315 320
 Asn Met Glu His Pro Asn Cys Thr Val Val Leu Ser Pro Val Glu Arg
 325 330 335
 Gln Tyr Glu Asp Leu Phe Leu Asn Ala Leu Ser Tyr Cys Lys
 340 345 350

<210> 5477

<211> 234

<212> PRT

<213> S.epidermidis

<400> 5477

Val Ser Leu Leu Tyr Glu Gly Lys Ala Lys Arg Val Phe Thr Thr Asn
 1 5 10 15
 Ile Asp Gly Gln Leu Arg Val Glu Tyr Lys Asp Glu Val Thr Ala Gly
 20 25 30
 Asn Gly Ala Lys Lys Asp Thr Met Ile Gly Lys Gly Lys Leu Asn Asn
 35 40 45
 Gln Ile Thr Ser Ile Ile Phe Asp Tyr Leu Thr His Asn His Ile Asp
 50 55 60
 Asn His Phe Ile Lys Gln Leu Ser Gln Thr Glu Gln Leu Val Gln Gln
 65 70 75 80
 Val Asp Ile Ile Pro Leu Glu Val Val Val Arg Asn Ile Ala Thr Gly
 85 90 95
 Ser Ile Thr Lys Arg Leu Gly Phe Lys Lys Gly His Thr Phe Glu Glu
 100 105 110
 Pro Leu Val Glu Phe Phe Tyr Lys Lys Asp Glu Leu Asn Asp Pro Leu
 115 120 125
 Ile Thr Asp Asp His Val Lys Leu Leu Gly Ile Ala Asn Asp Glu Glu
 130 135 140
 Ile Lys Gln Leu Lys Gln Met Ala Lys Asp Ile Asn Gln Val Leu Ile
 145 150 155 160
 Gln Leu Met Asn Glu Met Ser Leu Arg Leu Val Asp Phe Lys Val Glu
 165 170 175
 Phe Gly Lys Thr Asn Gly Gly Lys Ile Leu Leu Ala Asp Glu Ile Ser
 180 185 190
 Pro Asp Thr Cys Arg Ile Trp Asp Lys Asn Thr Asp Thr Asn Phe Asp
 195 200 205
 Lys Asp Val Tyr Arg Asn Asn Thr Gly Ser Leu Ile Glu Thr Tyr Gln
 210 215 220
 Thr Phe Leu Asn Lys Leu Glu Asp Leu Lys

225

230

<210> 5478

<211> 73

<212> PRT

<213> S.epidermidis

<400> 5478

```

Ser Gln Leu Phe Leu Arg Tyr Phe Phe Phe Thr Leu Asn Pro Thr Pro
1          5          10          15
Asn Val Ala Met Arg Ser Ile Asn Val Lys Ile Ile Asn Gly Thr Leu
20        25        30
Ala Thr Pro Asn Ala Lys Leu Asn Lys Val Lys Lys Met Thr Ala Asn
35        40        45
Ile Glu Lys Ile Gln Lys Ile Pro Leu Asp Phe Phe Cys Cys Ile Pro
50        55        60
Tyr Pro Thr Phe Tyr Leu Ser Phe Gln
65        70

```

<210> 5479

<211> 68

<212> PRT

<213> S.epidermidis

<400> 5479

```

Asn Met Ser Pro Ser Ser Lys Val Tyr Asn Ser Ile Val Ser Glu Tyr
1          5          10          15
Ile Ser Phe Ser Lys Ser Ile Met Met Tyr Ser Leu Lys Leu Ile Tyr
20        25        30
Pro Leu Lys Ile Asn Gln Ile Cys Ile Ser Phe Ile Ser Ala Ile Leu
35        40        45
Ile Leu Lys Arg Met Ile Ile Val Leu Lys Thr Glu Lys Ile Phe Asn
50        55        60
Asn Tyr Phe Ile
65

```

<210> 5480

<211> 249

<212> PRT

<213> S.epidermidis

<400> 5480

```

Arg His Met Leu Asn Ala Gln Phe Phe Thr Asp Thr Gly Gln His Arg
1          5          10          15
Glu Lys Asn Glu Asp Ala Gly Gly Ile Phe Tyr Asn Gln Thr Gln Gln
20        25        30
Gln Met Leu Val Leu Cys Asp Gly Met Gly Gly His Gln Ala Gly Glu
35        40        45
Ile Ala Ser Gln Phe Val Thr Tyr Glu Leu Gln Lys Arg Phe Glu Glu
50        55        60
Glu Asn Leu Ile Glu Ile Asn Arg Ala Glu Ser Trp Leu Arg Ser Asn
65        70        75        80
Ile Lys Glu Ile Asn Phe Gln Leu Tyr Asn Tyr Ala Gln Glu Asn Glu
85        90        95
Asp Tyr Arg Gly Met Gly Thr Thr Leu Val Cys Ala Ile Ile Tyr Asp
100       105       110

```

Lys Gln Val Val Val Ala Asn Val Gly Asp Ser Arg Ala Tyr Val Ile
 115 120 125
 Asn Gln Arg Gln Met Asp Gln Ile Thr Ser Asp His Ser Phe Val Asn
 130 135 140
 His Leu Val Met Thr Gly Gln Ile Thr Lys Asp Glu Ala Phe His His
 145 150 155 160
 Pro Gln Arg Asn Ile Ile Thr Lys Val Met Gly Thr Asp Lys Arg Val
 165 170 175
 Ser Pro Asp Leu Phe Ile Lys Arg Thr His Phe Tyr Asp Tyr Leu Leu
 180 185 190
 Leu Asn Ser Asp Gly Leu Thr Asp Tyr Val Arg Asp Tyr Glu Ile Gln
 195 200 205
 Glu Leu Leu Ser Ser Asn Asn Ser Leu Asp Val His Gly Asn Glu Leu
 210 215 220
 Leu Asp Leu Ala Leu Ala His Asp Ser Lys Asp Asn Val Ser Phe Ile
 225 230 235 240
 Leu Leu Lys Leu Glu Gly Asp Lys Val
 245

<210> 5481
 <211> 179
 <212> PRT
 <213> S.epidermidis

<400> 5481
 Asp Ile Met Leu Ser Val Ala Leu Asp Asp Ile Lys Lys Asn Gly Gly
 1 5 10 15
 Thr Ser Leu Lys Lys Tyr Tyr Ile Ser Ile Ser Leu Leu Met Thr
 20 25 30
 Ile Ile Val Leu Val Phe Asp Gln Val Ser Lys Trp Leu Ile Thr Ile
 35 40 45
 Ser Met Lys Val Gly Asp Ser Tyr Glu Ile Ile Pro Asn Phe Leu Asn
 50 55 60
 Ile Thr Ser His Arg Asn Asn Gly Ala Ala Trp Gly Ile Leu Ser Gly
 65 70 75 80
 Lys Met Leu Phe Phe Tyr Ile Ile Thr Ile Ile Ile Leu Ile Val Leu
 85 90 95
 Val Ile Phe Tyr Ile Lys Glu Ala Gln Phe Asn Leu Phe Met Gln Val
 100 105 110
 Ala Ile Ser Leu Leu Phe Ala Gly Ala Leu Gly Asn Phe Ile Asp Arg
 115 120 125
 Val Leu His Gly Glu Val Val Asp Phe Ile Asp Thr Asn Ile Phe Gly
 130 135 140
 Tyr Asp Phe Pro Ile Phe Asn Ile Ala Asp Ser Ser Leu Thr Ile Gly
 145 150 155 160
 Val Ile Phe Val Ile Ile Ala Leu Ile Lys Asp Ala Ile Ile Asn Lys
 165 170 175
 Lys Glu Val

<210> 5482
 <211> 802
 <212> PRT
 <213> S.epidermidis

<400> 5482

Thr Ile Met Leu Ile Ser Asn Glu Trp Leu Lys Asp Tyr Val Asn Val
 1 5 10 15
 Asp Gln Ser Val Gln Ala Leu Ala Glu Arg Ile Thr Arg Thr Gly Ile
 20 25 30
 Glu Val Asp Asp Ile Ile Asp Tyr Thr Lys Asp Ile Lys Lys Leu Val
 35 40 45
 Val Gly His Val Leu Ser Lys Thr Pro His Pro Asp Ala Asp Lys Leu
 50 55 60
 Asn Ile Cys Gln Val Asp Leu Gly Glu Glu Glu Pro Val Gln Ile Val
 65 70 75 80
 Cys Gly Ala Pro Asn Val Asp Glu Gly Gln His Val Ile Val Ala Lys
 85 90 95
 Val Gly Gly Arg Leu Pro Gly Gly Ile Lys Ile Lys Arg Ala Lys Leu
 100 105 110
 Arg Gly Glu Arg Ser Glu Gly Met Ile Cys Ser Leu Gln Glu Ile Gly
 115 120 125
 Ile Ser Ser His Val Thr Pro Lys Asn Tyr Glu Ser Gly Ile Tyr Val
 130 135 140
 Phe Pro Glu Ala Val Lys Pro Gly Thr Asp Ala Leu Glu Ala Ile Tyr
 145 150 155 160
 Leu Asn Asp Gln Val Met Glu Phe Asp Leu Thr Pro Asn Arg Ala Asp
 165 170 175
 Ala Leu Ser Met Val Gly Thr Ala Tyr Glu Val Ala Ala Leu Tyr Gln
 180 185 190
 Thr Lys Met Asn Lys Pro Gln Leu Thr Ser Asn Glu Ser Gln Glu Ser
 195 200 205
 Ala Lys Asp Glu Leu Thr Ile Glu Val Lys Asn Glu Asp Lys Val Pro
 210 215 220
 Tyr Tyr Ser Thr Arg Val His Asp Val Thr Ile Gly Pro Ser Pro
 225 230 235 240
 Val Trp Met Gln Phe Arg Leu Ile Lys Ala Gly Ile Arg Pro Ile Asn
 245 250 255
 Asn Val Val Asp Ile Ser Asn Tyr Val Leu Leu Glu Tyr Gly Gln Pro
 260 265 270
 Leu His Met Phe Asp Gln Glu Gln Ile Gly Ser Gln Ser Ile Glu Val
 275 280 285
 Arg Gln Ala Lys Lys Asp Glu Thr Met Arg Thr Leu Asp Gly Glu Glu
 290 295 300
 Arg Arg Leu Leu Asp Thr Asp Ile Val Ile Thr Asn Gly Lys Asp Pro
 305 310 315 320
 Ile Ala Leu Gly Gly Val Met Gly Gly Asp Phe Ser Glu Val Thr Glu
 325 330 335
 Gln Thr Arg His Val Val Val Glu Gly Ala Ile Phe Asp Pro Val Ser
 340 345 350
 Ile Arg His Thr Ser Arg Arg Leu Asn Leu Arg Ser Glu Ser Ser Ser
 355 360 365
 Arg Phe Glu Lys Gly Ile Ala Thr Glu Phe Val Asp Glu Ala Val Asp
 370 375 380
 Arg Ala Cys Tyr Leu Leu Glu Arg Tyr Ala Ser Gly Thr Val Leu Lys
 385 390 395 400
 Asp Arg Val Ser His Gly Asp Leu Gly Ser Phe Val Thr Pro Ile Glu
 405 410 415
 Ile Thr Ala Asp Lys Val Asn Arg Thr Ile Gly Phe Asn Leu Thr Asp
 420 425 430
 Glu Glu Ile Ile Asp Ile Phe Glu Gln Leu Gly Phe Asp Thr Glu Asn
 435 440 445

Lys Asn Gly Glu Ile Thr Val Asn Val Pro Ser Arg Arg Lys Asp Ile
 450 455 460
 Ser Ile Lys Glu Asp Leu Ile Glu Glu Val Ala Arg Ile Tyr Gly Tyr
 465 470 475 480
 Asp Glu Ile Pro Ser Thr Leu Pro Val Phe Lys Asp Val Thr Ser Gly
 485 490 495
 Glu Leu Thr Asp Arg Gln Phe Lys Thr Arg Thr Val Lys Glu Thr Leu
 500 505 510
 Glu Gly Ala Gly Leu Asp Gln Ala Ile Thr Tyr Ser Leu Val Ser Lys
 515 520 525
 Asn His Ala Thr Asp Phe Ala Leu Gln Asn Arg Pro Thr Ile Glu Leu
 530 535 540
 Leu Met Pro Met Ser Glu Ala His Ser Thr Leu Arg Gln Ser Leu Leu
 545 550 555 560
 Pro His Leu Ile Asp Ala Val Ser Tyr Asn Val Ala Arg Lys Asn Thr
 565 570 575
 Asn Val Lys Leu Tyr Glu Ile Gly Arg Val Phe Phe Gly Asn Gly Glu
 580 585 590
 Gly Glu Leu Pro Asp Glu Val Glu Tyr Leu Ser Gly Ile Leu Thr Gly
 595 600 605
 Asp Phe Val Asn Asn Thr Trp Gln Gly Lys Lys Glu Ser Val Asp Phe
 610 615 620
 Tyr Leu Thr Lys Gly Val Val Glu Arg Ile Ala Glu Lys Leu Asn Leu
 625 630 635 640
 Gln Phe Asp Phe Arg Ala Gly Gln Ile Asp Gly Leu His Pro Gly Arg
 645 650 655
 Thr Ala Ile Val Ser Leu Asn Gly Lys Asp Ile Gly Phe Ile Gly Glu
 660 665 670
 Leu His Pro Thr Leu Ala Ala Asn Asn Asp Leu Lys Arg Thr Tyr Val
 675 680 685
 Phe Glu Leu Asn Tyr Asp Ala Met Met Glu Val Ser Val Gly Tyr Ile
 690 695 700
 Asn Tyr Glu Pro Ile Pro Arg Phe Pro Gly Val Thr Arg Asp Ile Ala
 705 710 715 720
 Leu Glu Val Asn His Glu Val Thr Ser Ser Glu Leu Leu Ser Ile Ile
 725 730 735
 His Glu Asn Gly Glu Asp Ile Leu Asn Asp Thr Leu Val Phe Asp Val
 740 745 750
 Tyr Glu Gly Glu His Leu Glu Lys Gly Lys Lys Ser Ile Ala Ile Arg
 755 760 765
 Leu Ser Tyr Leu Asp Thr Glu Asn Thr Leu Thr Asp Glu Arg Val Asn
 770 775 780
 Ala Val His Asp Lys Ile Leu Glu Ala Leu Lys Lys His Gly Ala Ile
 785 790 795 800
 Ile Arg

<210> 5483

<211> 79

<212> PRT

<213> S.epidermidis

<400> 5483

Lys Asn Val Thr Gly Gly Gln Lys Ile Met Leu Asn Pro Pro Leu Asn
 1 5 10 15
 Gln Leu Thr Ala Lys Val Asn Ser Lys Tyr Leu Ile Ala Thr Thr Ala

20 25 30
 Ala Lys Arg Ala Arg Glu Leu Asp Glu Lys Arg Glu Thr Ala Leu Leu
 35 40 45
 Asp Gln Tyr His Ser Ala Lys Pro Val Gly Lys Ala Leu Glu Glu Ile
 50 55 60
 Ala Asp Gly Lys Ile Glu Pro Val Val Pro Lys Glu Tyr Leu Gly
 65 70 75

<210> 5484

<211> 44

<212> PRT

<213> S.epidermidis

<400> 5484

Tyr Lys Ser Thr Leu Leu Phe Asn Leu Phe Tyr Phe Thr Val Asp Ile
 1 5 10 15
 Tyr Val Lys Phe Ser Arg Ile Phe Ile Tyr Pro Lys Glu Ile Thr Gln
 20 25 30
 Gln Phe Tyr Asp Tyr Phe Phe Glu Arg Phe Ala Ser
 35 40

<210> 5485

<211> 187

<212> PRT

<213> S.epidermidis

<400> 5485

Arg Tyr Glu Phe Phe Tyr Ile Lys Arg Gly Glu Thr Met Ser Glu Arg
 1 5 10 15
 Ile Ile Leu Asp Glu Ala Ala Ile Gln Arg Thr Ile Thr Arg Ile Ala
 20 25 30
 His Glu Ile Leu Glu Tyr Asn Lys Gly Thr Lys Asp Leu Val Leu Leu
 35 40 45
 Gly Ile Lys Thr Arg Gly Ala Phe Leu Ala His Arg Ile Gln Asp Lys
 50 55 60
 Ile Asn Ser Ile Glu Gln Gln Leu Val Pro Thr Gly Thr Ile Asp Ile
 65 70 75 80
 Thr His Phe Arg Asp Asp Val Asp Lys Val Val Gln Gln Ala Asp Gln
 85 90 95
 Tyr Ala Phe Asp Ile Asn Val Asp Ile Asn Asn Lys Val Val Val Ile
 100 105 110
 Ile Asp Asp Val Leu Tyr Thr Gly Arg Thr Val Arg Ala Ser Leu Asp
 115 120 125
 Ala Ile Leu Leu His Thr Arg Pro Ile Lys Ile Gly Leu Ala Ala Leu
 130 135 140
 Val Asp Arg Gly His Arg Glu Leu Pro Ile Arg Ala Asp Phe Val Gly
 145 150 155 160
 Lys Asn Ile Pro Thr Ala Arg Asp Glu Ser Val Ser Val Tyr Leu Glu
 165 170 175
 Glu Ile Asp Asp Arg Asn Ala Val Val Ile Glu
 180 185

<210> 5486

<211> 44

<212> PRT

<213> S.epidermidis

<400> 5486

Leu Leu Ala Thr Gly Pro Phe Ala Leu Lys Thr Ser Ile Phe Glu Gln
 1 5 10 15
 Pro Leu Ser Lys Ile Ser Val Pro Asn Asn Arg Ser Lys Asp Leu Asn
 20 25 30
 Phe Asp Thr Phe Phe Asp Leu Leu Ile Leu Gln Met
 35 40

<210> 5487

<211> 77

<212> PRT

<213> S.epidermidis

<400> 5487

Glu Asp Asn Thr Thr Met Ala Val Phe Lys Val Phe Tyr Gln His Asn
 1 5 10 15
 Lys Asp Glu Val Ile Val Arg Glu Asn Thr Gln Thr Ile Tyr Val Glu
 20 25 30
 Gly Gln Thr Glu Glu Gln Val Arg Arg Tyr Leu Lys Asp Arg Asn Phe
 35 40 45
 Asn Ile Glu Phe Ile Thr Lys Leu Glu Gly Ala His Leu Glu Tyr Glu
 50 55 60
 Lys Glu His Ser Thr His Phe Asn Val Glu Asn Ala Glu
 65 70 75

<210> 5488

<211> 97

<212> PRT

<213> S.epidermidis

<400> 5488

Arg Met Asn Thr Ile Val Lys His Thr Val Gly Phe Ile Ala Ser Ile
 1 5 10 15
 Val Leu Thr Leu Leu Ala Val Phe Val Thr Leu Tyr Thr Asn Met Thr
 20 25 30
 Phe His Ala Lys Val Thr Ile Ile Phe Gly Phe Ala Phe Ile Gln Ala
 35 40 45
 Ala Leu Gln Leu Leu Met Phe Met His Leu Thr Glu Gly Lys Asp Gly
 50 55 60
 Arg Leu Gln Ser Phe Lys Val Ile Phe Ala Ile Ile Ile Thr Leu Val
 65 70 75 80
 Thr Val Ile Gly Thr Tyr Trp Val Met Gln Gly Gly His Ser Ser His
 85 90 95
 Leu

<210> 5489

<211> 40

<212> PRT

<213> S.epidermidis

<400> 5489

Ser Val Cys Thr Pro Thr Leu Leu Leu Gly Thr Met Val Met Ile Pro
 1 5 10 15
 Phe Thr His Asp His Phe Lys Ile Asp Lys Phe Lys Val Ile Glu Phe

Pro	Gln	Thr	Arg	Phe	Val	Leu	Lys	Lys	Ala	Leu	Glu	Gln	Asn	Leu	Lys
130						135					140				
Pro	Val	Val	Val	Val	Asn	Lys	Ile	Asp	Lys	Pro	Ala	Ala	Arg	Pro	Glu
145					150					155					160
Gly	Val	Val	Asp	Glu	Val	Leu	Asp	Leu	Phe	Ile	Glu	Leu	Glu	Ala	Asn
			165						170					175	
Asp	Glu	Gln	Leu	Asp	Phe	Pro	Val	Val	Tyr	Ala	Ser	Ala	Val	Asn	Gly
			180					185					190		
Thr	Ala	Ser	Leu	Asp	Ser	Glu	Lys	Gln	Asp	Glu	Asn	Met	Gln	Ser	Leu
		195					200					205			
Tyr	Glu	Thr	Ile	Ile	Asp	Tyr	Val	Pro	Ala	Pro	Val	Asp	Asn	Ser	Asp
	210					215						220			
Glu	Pro	Leu	Gln	Phe	Gln	Ile	Ala	Leu	Leu	Asp	Tyr	Asn	Asp	Tyr	Val
225					230					235					240
Gly	Arg	Ile	Gly	Val	Gly	Arg	Val	Phe	Arg	Gly	Lys	Met	Arg	Val	Gly
			245						250					255	
Asp	Asn	Val	Ser	Leu	Ile	Lys	Leu	Asp	Gly	Thr	Val	Lys	Asn	Phe	Arg
			260					265					270		
Val	Thr	Lys	Ile	Phe	Gly	Tyr	Phe	Gly	Leu	Lys	Arg	Glu	Glu	Ile	Glu
		275					280					285			
Glu	Ala	Gln	Ala	Gly	Asp	Leu	Ile	Ala	Val	Ser	Gly	Met	Glu	Asp	Ile
	290					295					300				
Asn	Val	Gly	Glu	Thr	Val	Thr	Pro	His	Asp	His	Arg	Asp	Pro	Leu	Pro
305					310					315					320
Val	Leu	Arg	Ile	Asp	Glu	Pro	Thr	Leu	Glu	Met	Thr	Phe	Lys	Val	Asn
			325						330					335	
Asn	Ser	Pro	Phe	Ala	Gly	Arg	Glu	Gly	Asp	Tyr	Val	Thr	Ala	Arg	Gln
			340					345					350		
Ile	Gln	Glu	Arg	Leu	Asp	Gln	Gln	Leu	Glu	Thr	Asp	Val	Ser	Leu	Lys
		355					360					365			
Val	Thr	Pro	Thr	Asp	Gln	Pro	Asp	Ser	Trp	Val	Val	Ala	Gly	Arg	Gly
	370					375						380			
Glu	Leu	His	Leu	Ser	Ile	Leu	Ile	Glu	Asn	Met	Arg	Arg	Glu	Gly	Phe
385					390					395					400
Glu	Leu	Gln	Val	Ser	Lys	Pro	Gln	Val	Ile	Leu	Arg	Glu	Ile	Asp	Gly
			405						410					415	
Val	Leu	Ser	Glu	Pro	Phe	Glu	Arg	Val	Gln	Cys	Glu	Val	Pro	Ser	Glu
			420					425					430		
Asn	Ala	Gly	Ala	Val	Ile	Glu	Ser	Leu	Gly	Ala	Arg	Lys	Gly	Glu	Met
		435					440					445			
Leu	Asp	Met	Met	Thr	Thr	Asp	Asn	Gly	Leu	Thr	Arg	Leu	Ile	Phe	Met
450						455					460				
Val	Pro	Ala	Arg	Gly	Met	Ile	Gly	Tyr	Thr	Thr	Glu	Phe	Met	Ser	Met
465					470					475					480
Thr	Arg	Gly	Tyr	Gly	Ile	Ile	Asn	His	Thr	Phe	Glu	Glu	Phe	Arg	Pro
			485						490					495	
Arg	Val	Lys	Ala	Gln	Ile	Gly	Gly	Arg	Asn	Gly	Ala	Leu	Ile	Ser	
			500					505					510		
Met	Asp	Gln	Gly	Gln	Ala	Thr	Ser	Tyr	Ala	Ile	Ile	Asn	Leu	Glu	Asp
		515					520					525			
Arg	Gly	Val	Asn	Phe	Met	Glu	Pro	Gly	Thr	Glu	Val	Tyr	Glu	Gly	Met
		530				535					540				
Ile	Val	Gly	Glu	His	Asn	Arg	Glu	Asn	Asp	Leu	Thr	Val	Asn	Ile	Thr
545					550					555					560
Lys	Ala	Lys	His	Gln	Thr	Asn	Val	Arg	Ser	Ala	Thr	Lys	Asp	Gln	Thr
			565						570					575	

Gln Thr Met Asn Arg Pro Arg Ile Leu Thr Leu Glu Glu Ala Leu Gln
 580 585 590
 Phe Ile Asn Asp Asp Glu Leu Val Glu Val Thr Pro Glu Ser Ile Arg
 595 600 605
 Leu Arg Lys Lys Ile Leu Asn Lys Ser Ala Arg Glu Lys Glu Ala Lys
 610 615 620
 Arg Val Lys Gln Leu Met Gln Asp Glu Gln
 625 630

<210> 5493
 <211> 62
 <212> PRT
 <213> S.epidermidis

<400> 5493
 Arg Ile Lys Thr Tyr Pro Ile Val Leu Glu Leu Leu Thr His Leu Gly
 1 5 10 15
 Val Leu Ile Met Lys Leu Phe Asn Ala Phe Lys Asp Ile Leu Glu Ala
 20 25 30
 Ala Ile Thr Asn Asp Gly Thr Gln Leu Gly Ala Ser Ile Val Asn Ile
 35 40 45
 Ile Glu Ser Ser Val Asp Met Val Asn Arg Phe Leu Gly Asn
 50 55 60

<210> 5494
 <211> 87
 <212> PRT
 <213> S.epidermidis

<400> 5494
 Ile Met Lys Thr Ile Glu Leu His Ile Thr Leu Gln Pro Gln Val Leu
 1 5 10 15
 Asp Thr Gln Gly Gln Ala Leu Asn Arg Ala Val His Asp Leu Gly Tyr
 20 25 30
 Glu Gln Val Asn Asp Ile Arg Val Gly Lys Val Leu Tyr Met Thr Val
 35 40 45
 Asn Glu Pro Thr Asp Glu Ala Val Asp Asn Ile Ile Thr Thr Leu Ser
 50 55 60
 Glu Lys Leu Phe Ala Asn Thr Val Ile Glu Glu Tyr Ser Tyr Lys Val
 65 70 75 80
 Ile Asp Glu Lys Glu Lys Ala
 85

<210> 5495
 <211> 155
 <212> PRT
 <213> S.epidermidis

<400> 5495
 Asn Lys Glu Thr Lys Gly Asp Asn Val Met Gly Glu Val Lys His Leu
 1 5 10 15
 Gln Ile Asn Tyr Lys Thr Asp Glu Leu Phe Ala Asp Phe Arg Glu Phe
 20 25 30
 Gly Asn Lys Asn Leu Tyr Met Ile Glu Glu Leu Lys Gly Gln Met Ile
 35 40 45
 Asp Ala Ser Ser Asp Ser Pro Phe Tyr Gly Ile Phe Val Gly Asn Lys

50		55		60
Leu Val Ala Arg Met Ala	Leu Leu Asp Lys Gly	Glu Val Glu Glu Thr		
65	70	75	80	
Tyr Phe Pro Asn Ser Asn	Asp Tyr Ile Leu Leu	Trp Lys Leu Glu Val		
	85	90	95	
Leu Asp Thr Tyr Gln Arg	Arg Gly Tyr Ala Lys	Gln Leu Leu Asn Phe		
	100	105	110	
Ala Lys Glu Asn Lys Lys	Pro Ile Lys Ala Ile	Ala Arg Asn Asn Ser		
	115	120	125	
Lys Glu Phe Phe Leu Lys	Gln Gly Phe Lys Asp	Val Glu Thr Lys Asn		
	130	135	140	
Pro Glu Gly His Asp Ile	Leu Ile Trp Asn Pro			
145	150	155		

<210> 5496

<211> 41

<212> PRT

<213> S.epidermidis

<400> 5496

Lys Lys Leu Thr Ile Glu	Met Gln Ser Ser Leu	Asn Asn Tyr Pro Phe
1	5	10
Lys Thr Val Arg Glu Thr	Glu Lys Gly Glu Val	Phe Leu Met Asp Lys
	20	25
Ser Thr Tyr Asp Tyr Lys	Lys Ile Met	
	35	40

<210> 5497

<211> 46

<212> PRT

<213> S.epidermidis

<400> 5497

Ile Phe Met Thr Asn Lys	Glu Phe Glu Lys Lys	Ser Ala Glu Lys Ala
1	5	10
Lys Glu Val Glu Glu Lys	Leu Lys Glu Gln Asn	Glu Glu Lys Thr Asp
	20	25
Asp Ile Glu Gln Thr Lys	Lys Asp Ile Gln Asp	Thr Leu Asp
	35	40

<210> 5498

<211> 80

<212> PRT

<213> S.epidermidis

<400> 5498

Ile Ile Tyr Leu Ile Arg	Phe Glu Ile Ile Ser	Phe Ile Phe Glu Phe
1	5	10
Leu Thr Lys Arg Ser Leu	Glu Leu Lys Val Leu	Lys Leu Val Lys Arg
	20	25
Asp Asn Phe Tyr Ile Ile	Ser Tyr Arg Asn Cys	Leu Phe Tyr Asn Phe
	35	40
Gln Thr Ile Ile Ser Leu	Leu Ile Tyr Tyr Leu	Thr Tyr Ile Ser Ser
	50	55
Phe Asn Thr Asn His Ile	Pro Ser Ile Thr Ser	Gln Leu Phe Leu Val
65	70	75

<210> 5499
 <211> 47
 <212> PRT
 <213> S.epidermidis

<400> 5499
 Leu Phe Lys Ala Gln Ala Pro Pro Ile Ile Ser Val Glu Pro Thr Ser
 1 5 10 15
 Ile Asn Ser Ile Cys Gly Met Glu Asp Arg Lys Glu Trp Phe Val Ile
 20 25 30
 Thr Ile Ala Ser His Ala Pro Ala Lys Ala Gly Ile Lys Leu Pro
 35 40 45

<210> 5500
 <211> 65
 <212> PRT
 <213> S.epidermidis

<400> 5500
 Lys Leu Phe Tyr Met Thr Met His His Leu Lys Glu His Ser Ile Asn
 1 5 10 15
 Lys Leu Lys Gln Tyr Ile Leu Leu Leu Thr Tyr Leu Lys Ser Asp Thr
 20 25 30
 Ser Tyr Arg His Ile Ile Gln Leu Asn Ser Phe Tyr Ile Arg Ser Tyr
 35 40 45
 Phe Ser Ile Ser Asn Ile Leu Phe Leu Tyr Leu Ile Asp Lys Ile Tyr
 50 55 60
 Gln
 65

<210> 5501
 <211> 52
 <212> PRT
 <213> S.epidermidis

<400> 5501
 Val Val Phe Tyr Thr Tyr Leu Met Lys Cys Phe Phe Lys Ser Asn Ser
 1 5 10 15
 Asn Val Ile Arg Ile Asn Leu Lys Thr Thr Lys Tyr Met Gln Asn Lys
 20 25 30
 Thr Ala Leu Phe Ile Gln Lys His His Val Lys Tyr Asn Leu Thr Glu
 35 40 45
 Ile Leu Val Asn
 50

<210> 5502
 <211> 46
 <212> PRT
 <213> S.epidermidis

<400> 5502
 Leu Leu Leu Tyr Leu Ser Phe Leu Thr Val Arg His Ala Gln Leu Tyr
 1 5 10 15
 Cys Ala Arg Phe Tyr Arg Tyr Lys His Met Arg Phe Tyr Ile Lys Leu
 20 25 30

Thr Phe Met Tyr Lys Asn Leu Tyr Tyr Ser Glu Lys Tyr Lys
 35 40 45

<210> 5503
 <211> 303
 <212> PRT
 <213> S.epidermidis

<400> 5503

Ile Lys Leu Tyr Phe Tyr Arg Arg Arg Phe Met Glu His Leu Leu Ser
 1 5 10 15
 Met Glu His Leu Ser Asn Ser Glu Ile Tyr Asp Leu Ile Thr Ile Ala
 20 25 30
 Cys Gln Phe Lys Ser Gly Glu Arg Pro Leu Pro Gln Phe Asn Gly Gln
 35 40 45
 Tyr Val Ser Asn Leu Phe Phe Glu Asn Ser Thr Arg Thr Lys Cys Ser
 50 55 60
 Phe Glu Met Ala Glu Gln Lys Leu Gly Leu Lys Leu Ile Asn Phe Glu
 65 70 75 80
 Thr Ser Thr Ser Ser Val Lys Lys Gly Glu Ser Leu Tyr Asp Thr Cys
 85 90 95
 Lys Thr Leu Glu Ser Ile Gly Val Asp Leu Leu Val Ile Arg Asp Ser
 100 105 110
 Gln Asn Ser Tyr Tyr Glu Glu Leu Asp Gln Leu Asn Ile Pro Ile Ala
 115 120 125
 Asn Ala Gly Asp Gly Ser Gly Gln His Pro Thr Gln Ser Leu Leu Asp
 130 135 140
 Ile Met Thr Ile Tyr Glu Glu Tyr Gly Ser Phe Glu Gly Leu Asn Ile
 145 150 155 160
 Leu Ile Cys Gly Asp Ile Lys Asn Ser Arg Val Ala Arg Ser Asn Tyr
 165 170 175
 His Ser Leu Thr Ser Leu Gly Ala Asn Val Met Phe Ser Ser Pro Lys
 180 185 190
 Glu Trp Val Asp Asn Thr Leu Glu Ala Pro Tyr Val Glu Ile Asp Glu
 195 200 205
 Val Ile Asp Lys Val Asp Ile Val Met Leu Leu Arg Val Gln His Glu
 210 215 220
 Arg His Gly Ile Ser Gly Glu Ala Asn Phe Ala Ala Glu Glu Tyr His
 225 230 235 240
 Gln Gln Phe Gly Leu Thr Gln Ala Arg Tyr Asp Lys Leu Lys Glu Glu
 245 250 255
 Ala Ile Val Met His Pro Ala Pro Val Asn Arg Gly Val Glu Ile Lys
 260 265 270
 Ser Glu Leu Val Glu Ala Pro Lys Ser Arg Ile Phe Lys Gln Met Glu
 275 280 285
 Asn Gly Met Tyr Leu Arg Met Ala Val Ile Ser Ala Leu Leu Gln
 290 295 300

<210> 5504
 <211> 43
 <212> PRT
 <213> S.epidermidis

<400> 5504

Ile Phe Ile Tyr Leu Tyr Tyr Val Ser Glu Lys Lys Arg Lys Ile Lys
 1 5 10 15

Arg Arg Asn Thr Tyr Ile Phe Phe Ile Thr Ala Leu Lys Lys Ile Asn
 20 25 30
 Ile His Phe Gln Gln Ser Asn His Leu Ile Ile
 35 40

<210> 5505

<211> 48

<212> PRT

<213> S.epidermidis

<400> 5505

Ser Leu Ser Tyr Phe Ile Lys Asn Thr Pro Tyr Gln Leu Phe Leu Leu
 1 5 10 15
 Ile Gly Arg Ile Phe Met Asp Cys Ile Gln His Leu Ile Val Lys His
 20 25 30
 Gln Ser Lys Pro Ile Asn Ile Tyr Met Asp Arg Pro Phe Phe Val Cys
 35 40 45

<210> 5506

<211> 248

<212> PRT

<213> S.epidermidis

<400> 5506

Val Lys Ser Tyr Leu Leu Ile Gln Ser Leu Lys Asn Ile Ala Ile Lys
 1 5 10 15
 Leu Ser Met Lys Arg Arg Lys His Asn Met Lys Phe Ala Val Leu Val
 20 25 30
 Phe Pro Gly Ser Asn Cys Asp Arg Asp Met Tyr Asn Ala Ala Ile Lys
 35 40 45
 Ser Gly Val Asp Ala Ala Tyr Val Asp Tyr Arg Glu Thr Thr Leu Asp
 50 55 60
 Gly Phe Asp Gly Val Leu Ile Pro Gly Gly Phe Ser Phe Gly Asp Tyr
 65 70 75 80
 Leu Arg Ser Gly Ala Met Ala Ser Val Ala Pro Ile Ile Lys Glu Val
 85 90 95
 Lys Arg Phe Ala Lys Glu Gly Lys Pro Val Leu Gly Val Cys Asn Gly
 100 105 110
 Phe Gln Ile Leu Thr Glu Ile Gly Leu Leu Pro Gly Ala Leu Leu His
 115 120 125
 Asn Asp Ser His Leu Phe Ile Ser Arg Asn Glu Thr Leu Lys Ile Thr
 130 135 140
 Asn Asn Gln Thr Pro Phe Thr His Leu Tyr Val Lys Asn Glu Asn Val
 145 150 155 160
 Val Tyr Pro Val Ala His Gly Glu Gly His Tyr Tyr Cys Thr Asp Glu
 165 170 175
 Ile Tyr Arg Glu Leu Asn Asp Asn Asn Gln Ile Ile Leu Lys Tyr Thr
 180 185 190
 Asn Asn Pro Asn Gly Ser Tyr Glu Asp Ile Ala Gly Ile Val Asn Lys
 195 200 205
 Glu Gly Asn Val Cys Gly Met Met Pro His Pro Glu Arg Ala Leu Glu
 210 215 220
 Thr Leu Leu Gly Thr Asn Ser Gly Val Lys Leu Phe Glu Ser Met Val
 225 230 235 240
 Lys Ser Trp Arg Glu Gln Asn Val
 245

<210> 5507
 <211> 631
 <212> PRT
 <213> S.epidermidis

<400> 5507

Ile	Asn	Ile	Tyr	Lys	Ile	Asn	Ile	Asn	Lys	Asp	Trp	Gly	Ile	Thr	Leu
1				5					10					15	
Ser	Asn	Cys	Ser	Ser	Phe	Ile	Leu	Phe	Ser	Leu	Ile	Asn	Leu	Ile	Met
			20					25					30		
Glu	Arg	Arg	Ser	Pro	Leu	Glu	Glu	Tyr	Gln	Lys	Lys	Ile	Lys	Glu	Lys
			35				40					45			
Leu	Asn	Val	Val	Pro	Leu	Glu	Pro	Gly	Cys	Tyr	Leu	Met	Lys	Asp	Arg
	50					55					60				
Asn	Asp	Gln	Val	Ile	Tyr	Val	Gly	Lys	Ala	Lys	Arg	Leu	Arg	Asn	Arg
65				70						75				80	
Leu	Arg	Ser	Tyr	Phe	Thr	Gly	Ala	His	Asp	Ala	Lys	Thr	Thr	Arg	Leu
				85				90						95	
Val	Gly	Glu	Ile	Arg	Asn	Phe	Glu	Phe	Ile	Val	Thr	Ser	Ser	Glu	Thr
			100					105					110		
Glu	Ser	Leu	Leu	Leu	Glu	Leu	Asn	Leu	Ile	Lys	Gln	Tyr	Gln	Pro	Arg
	115						120					125			
Tyr	Asn	Ile	Leu	Leu	Lys	Asp	Asp	Lys	Ser	Tyr	Pro	Phe	Ile	Lys	Ile
	130					135					140				
Thr	Lys	Glu	Lys	His	Pro	Arg	Leu	Leu	Val	Thr	Arg	Thr	Val	Lys	Lys
145					150					155				160	
Asn	Ser	Gly	Lys	Tyr	Phe	Gly	Pro	Tyr	Pro	Asn	Ala	Tyr	Ser	Ala	Gln
				165					170					175	
Glu	Thr	Lys	Lys	Leu	Leu	Asp	Arg	Ile	Tyr	Pro	Phe	Arg	Lys	Cys	Asp
			180					185					190		
Asn	Met	Pro	Asp	Lys	Leu	Cys	Leu	Tyr	Tyr	His	Ile	Gly	Gln	Cys	Met
		195					200					205			
Gly	Pro	Cys	Val	Tyr	Asp	Val	Asp	Leu	Glu	Lys	Tyr	Ala	Gln	Met	Thr
	210					215					220				
Lys	Glu	Ile	Thr	Asp	Phe	Leu	Asn	Gly	Glu	Asp	Lys	Thr	Ile	Leu	His
225					230					235				240	
His	Leu	Glu	Asp	Arg	Met	Asn	Lys	Ala	Ser	Glu	Gln	Leu	Asp	Phe	Glu
				245					250					255	
Gln	Ala	Lys	Glu	Tyr	Arg	Asp	Met	Ile	Gln	His	Ile	His	Asn	Leu	Thr
			260					265					270		
Lys	Lys	Gln	Lys	Ile	Met	Ser	Ser	Asp	Asn	Thr	Ile	Arg	Asp	Val	Phe
		275					280					285			
Gly	Tyr	Ser	Val	Ser	Lys	Gly	Trp	Met	Cys	Val	Gln	Val	Phe	Phe	Val
	290					295					300				
Arg	Gln	Gly	Asn	Met	Ile	Lys	Arg	Asp	Ala	Thr	Met	Ile	Pro	Leu	Gln
305					310					315				320	
Gln	Thr	Glu	Glu	Glu	Glu	Phe	Tyr	Thr	Phe	Ile	Gly	Gln	Phe	Tyr	Ser
				325					330					335	
Leu	Asn	Gln	His	Leu	Leu	Pro	Lys	Glu	Val	His	Val	Pro	Lys	Asn	Leu
			340					345					350		
Asp	Lys	Asp	Ile	Ile	Gln	Ser	Val	Val	Asp	Thr	Lys	Ile	Val	Gln	Pro
		355					360					365			
Val	Arg	Gly	Ala	Lys	Lys	Asp	Met	Ile	Asn	Leu	Ala	Asn	His	Asn	Ala
	370					375					380				
Glu	Val	Gln	Leu	Asp	Asn	Lys	Phe	Glu	Leu	Ile	Ala	Arg	Asp	Glu	Ser

385 390 395 400
 Arg Thr Ile Lys Ala Ile Glu Glu Leu Gly Glu Arg Met Gly Ile Gln
 405 410 415
 Thr Pro Ile Arg Ile Glu Ala Phe Asp Asn Ser Asn Ile Gln Gly Val
 420 425 430
 Asp Pro Val Ser Ala Met Val Thr Phe Val Asp Gly Lys Pro His Lys
 435 440 445
 Lys Asp Tyr Arg Lys Tyr Lys Ile Lys Thr Val Glu Gly Pro Asp Asp
 450 455 460
 Tyr Lys Ser Met Arg Glu Val Val Arg Arg Arg Tyr Thr Arg Val Leu
 465 470 475 480
 Asn Glu Gly Leu Pro Leu Pro Asp Leu Ile Ile Val Asp Gly Gly Lys
 485 490 495
 Gly His Met Asn Gly Val Met Asp Val Leu Glu Asn Glu Leu Gly Leu
 500 505 510
 Asp Ile Pro Val Ala Gly Leu Gln Lys Asn Asp Lys His Gln Thr Ser
 515 520 525
 Glu Leu Leu Tyr Gly Ala Ser Ala Glu Ile Val Pro Leu Lys Lys Asn
 530 535 540
 Ser Gln Ala Phe Tyr Leu Leu His Arg Ile Gln Asp Glu Val His Arg
 545 550 555 560
 Phe Ala Ile Thr Phe His Arg Gln Thr Arg Gln Lys Thr Gly Leu Lys
 565 570 575
 Ser Val Leu Asp Asp Ile Asp Gly Ile Gly Thr Lys Arg Lys Thr Ser
 580 585 590
 Leu Leu Arg Thr Phe Gly Ser Ile Lys Lys Met Lys Glu Ala Ser Phe
 595 600 605
 Asp Glu Leu Arg Gln Ala Gly Leu Pro Glu Lys Val Ala Lys Asn Leu
 610 615 620
 Gln Asn Ala Leu Gln Asn Lys
 625 630

<210> 5508

<211> 46

<212> PRT

<213> S.epidermidis

<400> 5508

Cys Phe Leu Tyr Met Asn Leu Lys Leu Met Cys Ser Ser Phe His Leu
 1 5 10 15
 Ile His Arg Tyr Leu Val Phe Leu Ile His Glu Pro Gln Ala His Val
 20 25 30
 Phe Val Cys Ser Phe Ser Asn Ile Thr Tyr Thr Phe His Arg
 35 40 45

<210> 5509

<211> 43

<212> PRT

<213> S.epidermidis

<400> 5509

Ser Phe Lys Tyr Asn Asn Glu Phe Ser Ser Asn Ser Gln Tyr Leu Leu
 1 5 10 15
 Ile Glu His Leu Thr Leu Asn Ser Val Ser Val Asn Val Phe Lys Gln
 20 25 30
 Phe Thr Ile Tyr Ile Ile Phe Ile Lys Val Ser

35

40

<210> 5510

<211> 541

<212> PRT

<213> S.epidermidis

<400> 5510

Arg	Ser	Lys	Tyr	Met	Lys	Cys	Asn	Thr	Leu	Lys	Leu	Thr	Glu	Gln	Asp
1				5					10					15	
Gln	Phe	Ile	Asn	Lys	Ile	Lys	Asn	Ser	Glu	Ser	Gln	Ile	Thr	Ser	Phe
			20					25					30		
Tyr	Glu	Tyr	Asp	Ala	Ala	Lys	Lys	Glu	Ser	Phe	Tyr	Arg	Arg	Leu	Lys
			35				40					45			
Thr	Pro	Asn	Asn	Gly	Arg	Glu	Phe	His	Leu	Ser	Arg	Val	Ile	Lys	Ser
	50					55					60				
Tyr	Met	Asn	Glu	Leu	Lys	Leu	Thr	His	Gln	Gln	Leu	Asn	Asn	Ile	Asp
65					70				75					80	
Ala	Leu	Ala	Asp	Gly	Ala	Lys	Val	Val	Ile	Gly	Gly	Gln	Gln	Ala	Gly
				85					90					95	
Leu	Phe	Gly	Gly	Pro	Leu	Tyr	Thr	Phe	His	Lys	Ile	Phe	Ser	Ile	Ile
			100					105					110		
Thr	Leu	Ser	Arg	Gln	Leu	Ser	Glu	Glu	Tyr	Asp	Thr	Pro	Ile	Val	Pro
		115					120					125			
Val	Phe	Trp	Ile	Ala	Gly	Glu	Asp	His	Asp	Phe	Glu	Glu	Val	Asn	His
	130				135						140				
Thr	Tyr	Ala	Phe	Asn	Asn	Lys	Glu	Thr	Thr	Leu	Lys	Lys	Val	Lys	Tyr
145					150					155					160
His	Thr	Met	Thr	Pro	Pro	Asp	Ser	Asn	Val	Ser	Arg	Tyr	Thr	Pro	Asp
				165					170					175	
Lys	Asn	Glu	Leu	Lys	Ala	Ser	Leu	Asn	His	Phe	Phe	Lys	Glu	Met	Lys
			180					185					190		
Glu	Thr	Val	His	Thr	Gln	Asp	Val	Tyr	Gln	Met	Cys	Val	Asn	Ile	Ile
		195					200					205			
Asn	Gln	Phe	Asp	Ser	Trp	Thr	Asp	Ile	Phe	Lys	Gly	Leu	Ile	His	Glu
	210					215					220				
Val	Phe	Lys	Asp	Tyr	Gly	Ile	Leu	Leu	Ile	Asp	Ala	Gln	Tyr	Pro	Glu
225					230					235				240	
Leu	Arg	Gln	Met	Glu	Lys	Pro	Leu	Phe	Lys	Glu	Ile	Leu	Glu	Lys	Arg
				245					250					255	
Asn	Gln	Val	Asp	Gln	Ser	Phe	Arg	Glu	Thr	Gln	Ile	Arg	Thr	Thr	Gln
			260					265					270		
Gln	Gln	Leu	Pro	Ser	Met	Ile	Gln	Thr	Glu	Thr	Asn	Thr	His	Leu	Phe
		275					280					285			
Ile	His	Glu	Asp	Gly	Met	Arg	Gln	Leu	Leu	Asn	Phe	Asp	Gly	Thr	Tyr
	290					295					300				
Phe	Lys	Leu	Asn	Lys	Thr	Glu	Lys	Arg	Tyr	Thr	Lys	Gln	Asn	Leu	Leu
305					310					315				320	
Asp	Ile	Ile	Glu	Arg	Glu	Pro	Glu	Arg	Ile	Ser	Asn	Asn	Val	Val	Thr
				325					330					335	
Arg	Pro	Val	Val	Glu	Glu	Trp	Leu	Phe	Asn	Thr	Val	Ala	Phe	Ile	Gly
			340					345					350		
Gly	Pro	Ser	Glu	Ile	Lys	Tyr	Trp	Ala	Glu	Leu	Lys	Gly	Val	Phe	Asp
		355					360					365			
Thr	Leu	Asn	Val	Glu	Met	Pro	Ile	Val	Met	Pro	Arg	Leu	Arg	Ile	Thr
	370					375					380				

Tyr Leu Tyr Ala Arg Thr Lys Lys Leu Leu Lys Gln Tyr Asn Leu Ser
 385 390 395 400
 Ile Glu Ser Val Ile Ala Asn Gly Val Glu Gln Glu Arg Gln Arg Phe
 405 410 415
 Val Arg Glu Lys Ala Ser Asn Asn Phe Ile Asn Glu Val Glu Glu Met
 420 425 430
 Lys Ile Gln Gln Gln Glu Leu Tyr Asn Asn Leu Phe Thr Tyr Val Glu
 435 440 445
 Asn Asn His Asp Asn Gln Leu Leu Leu Glu Lys Asn Asn Gln Ile His
 450 455 460
 Leu Asn Gln Tyr Asp Tyr Leu Ile Lys Arg Tyr Leu Leu Asn Ile Glu
 465 470 475 480
 Arg Glu Asn Asp Ile Ser Met Arg Gln Phe Arg Glu Ile Ser Glu Thr
 485 490 495
 Leu His Pro Met Gly Gly Leu Gln Glu Arg Val Trp Asn Pro Leu Gln
 500 505 510
 Ile Met Asn Asp Phe Gly Ile Asp Val Phe Ser Pro Ser Thr Tyr Pro
 515 520 525
 Pro Leu Ser Tyr Ser Phe Asp His Leu Ile Ile Asn Pro
 530 535 540

<210> 5511
 <211> 42
 <212> PRT
 <213> S.epidermidis

<400> 5511
 Ile Arg Thr Leu Ser Lys Ser Phe Leu Ser Leu Thr Met Ile Ile Tyr
 1 5 10 15
 Lys Asn Ile Phe Ile Pro Cys Lys Leu Tyr Thr Lys Leu Asn Asn Asp
 20 25 30
 Ile Val Asn Ile Ala Leu Phe Ser Gln Arg
 35 40

<210> 5512
 <211> 48
 <212> PRT
 <213> S.epidermidis

<400> 5512
 Phe Ile Lys Tyr Thr Ile Ala Leu Asn Cys Ile Thr Leu Leu Ile Lys
 1 5 10 15
 Leu Gln Leu Ser Ser Thr Phe Tyr Cys Tyr Lys Ile Leu Leu Thr Asn
 20 25 30
 Asp Tyr Lys Ile Glu Leu Asn Asn Leu Leu Phe Asn Ser Ile Phe Ile
 35 40 45

<210> 5513
 <211> 64
 <212> PRT
 <213> S.epidermidis

<400> 5513
 Trp Val Asp Phe Ser His Ser Ser Ser Pro Phe Asn Phe Tyr His Lys
 1 5 10 15
 Asp Tyr Thr Phe Leu Ile Val Asn Val Met Leu Ser Met Thr Phe Val

20 25 30
 Lys Ala Leu Ala Val Ser Ser Asp Val Lys Gln Gly Thr Pro Phe Ser
 35 40 45
 Thr Val Val Arg Arg Ile Trp Asn Pro Ser Arg Ser Ile Ser Phe Pro
 50 55 60

<210> 5514

<211> 68

<212> PRT

<213> S.epidermidis

<400> 5514

Lys Val Gly Tyr Gly Met Gln Gln Lys Lys Ser Lys Gly Ile Phe Trp
 1 5 10 15
 Ile Phe Ser Ile Leu Ala Val Ile Phe Leu Thr Leu Phe Ser Phe Ala
 20 25 30
 Leu Gly Val Ala Asn Val Pro Leu Met Ile Leu Thr Phe Ile Leu Leu
 35 40 45
 Ile Ala Thr Phe Gly Val Gly Phe Ser Val Lys Lys Lys Tyr Arg Lys
 50 55 60
 Asn Asn Trp Leu
 65

<210> 5515

<211> 233

<212> PRT

<213> S.epidermidis

<400> 5515

Ile Gly Asp Leu Asn Met Lys Phe Lys Asn Ile Leu Phe Asp Phe Asp
 1 5 10 15
 Asp Thr Leu Val Asp Phe Tyr Asp Ala Glu Lys Lys Ala Phe Tyr Asn
 20 25 30
 Leu Ala Gln Lys Tyr Asn His Gln Pro Thr Gln Gln Asp Phe Glu His
 35 40 45
 Phe Lys Lys Val Asn Gln Ala His Trp Glu Ala Phe Gln Gln Asn Lys
 50 55 60
 Leu Thr Lys Asp Glu Val Leu Ser Gln Arg Phe Ile Asn Tyr Phe Asn
 65 70 75 80
 Asp Tyr Gln Ile His Val Asn Gly Lys Glu Ala Asp Lys Cys Phe Arg
 85 90 95
 Ala Glu Leu Ala Met Ala Pro Val Lys Leu Phe Asp His Thr Leu Glu
 100 105 110
 Val Ile Gln Gln Leu Lys Leu Asn His Ser Leu Tyr Ile Val Thr Asn
 115 120 125
 Gly Val Thr Glu Thr Gln Leu Arg Arg Ile Ala Gln Thr Gln Phe Asn
 130 135 140
 Glu Ile Phe Gln Asp Val Phe Ile Ser Glu Lys Ala Gly Phe Gln Lys
 145 150 155 160
 Pro Met Thr Glu Phe Phe Asp Phe Val Phe Glu His Ile Gly Glu Asn
 165 170 175
 Asn Arg Asn Gln Thr Leu Ile Val Gly Asp Ser Leu Thr Ser Asp Ile
 180 185 190
 Leu Gly Gly Lys Asn Ala Asn Ile Ser Thr Cys Trp Phe Asn Ile Arg
 195 200 205
 Gln Lys Glu Asn His Thr Ser Ile Gln Pro Asp Tyr Ile Ile Asn Asp

210 215 220
 Leu Ser Glu Met Ile Arg Ile Val Glu
 225 230

<210> 5516
 <211> 608
 <212> PRT
 <213> S.epidermidis

<400> 5516
 Lys Arg Tyr His Ile Asp Phe Gln Thr Leu Ser Asn Trp Ser Asp Val
 1 5 10 15
 Ser Met Tyr Tyr Thr Asn Ser Asn Tyr Glu Ala Phe Ala Arg Pro Lys
 20 25 30
 Lys Pro Glu Asn Val Asp Asn Lys Ser Ala Tyr Leu Ile Gly Ala Gly
 35 40 45
 Leu Ala Ser Leu Ala Ala Ala Cys Phe Leu Ile Arg Asp Gly Gln Met
 50 55 60
 Lys Gly Glu Asn Ile His Ile Leu Glu Glu Leu Asp Ile Ser Gly Gly
 65 70 75 80
 Ser Leu Asp Gly Ile Asn Met Glu His His Gly Tyr Val Val Arg Gly
 85 90 95
 Gly Arg Glu Met Glu Asn His Phe Glu Cys Leu Trp Asp Leu Phe Arg
 100 105 110
 Ser Ile Pro Ser Leu Glu Gln Thr Asn Ala Ser Val Leu Asp Glu Phe
 115 120 125
 Tyr Trp Leu Asn Lys Glu Asp Pro Asn Tyr Ser Lys Cys Arg Ala Ile
 130 135 140
 Glu Ser Gly Gly Lys Arg Ile Asp Thr Asp Gly Asp Phe Thr Leu Thr
 145 150 155 160
 Lys Lys Ala Ile Lys Glu Ile Leu Asn Leu Cys Leu Met Lys Glu Glu
 165 170 175
 Asp Leu Asp Asp Val Lys Ile Thr Asp Val Phe Ser Arg Asp Phe Leu
 180 185 190
 Asn Ser Asn Phe Trp Leu Tyr Trp Lys Thr Met Phe Ala Phe Glu Pro
 195 200 205
 Trp His Ser Ala Met Glu Met Arg Arg Tyr Leu Met Arg Phe Val His
 210 215 220
 His Ile Gly Gly Leu Ala Asp Phe Ser Ala Leu Lys Phe Thr Lys Tyr
 225 230 235 240
 Asn Gln Tyr Glu Ser Leu Val Leu Pro Met Ile Glu Tyr Leu Lys Ser
 245 250 255
 His Ser Val Asn Phe Glu Phe Gly Val Gln Val Asn Asn Ile Leu Val
 260 265 270
 Asp Ala Thr Pro Ser Thr Lys Ile Ala Arg Glu Ile Ile Leu Thr Arg
 275 280 285
 Asp Asp Lys Glu Glu Ser Ile Pro Leu Thr Val Asn Asp Leu Val Phe
 290 295 300
 Val Thr Asn Gly Ser Ile Thr Glu Ser Ser Thr Tyr Gly Asp Asn Asp
 305 310 315 320
 His Pro Ala Pro Ile Thr His Ser Leu Gly Gly Ser Trp Thr Leu Trp
 325 330 335
 Lys Asn Leu Ala Asn Gln Ser Pro Glu Phe Gly Arg Pro Glu Lys Phe
 340 345 350
 Cys Asp His Ile Pro Ala Lys Ser Trp Phe Val Ser Ala Thr Ala Thr
 355 360 365

Thr Asp Asn Lys Lys Ile Ile Ser Tyr Ile Glu Gln Leu Cys Lys Arg
 370 375 380
 Asp Val Leu Ser Gly Arg Thr Val Thr Gly Gly Ile Ile Ser Val Ala
 385 390 395 400
 Asn Ser Ser Trp Gln Leu Ser Phe Thr Val Asn Arg Gln Gln Gln Phe
 405 410 415
 Lys Lys Gln Pro Lys Asn Gln Val Ser Val Trp Ile Tyr Ala Leu Tyr
 420 425 430
 Ser Asp Glu Lys Gly Asp Phe Ile Lys Lys Pro Ile Thr Glu Cys Thr
 435 440 445
 Gly Ser Glu Ile Cys Gln Glu Val Leu Tyr His Met Gly Val Pro Gln
 450 455 460
 Glu Glu Ile Val Glu Leu Ala Gln Ser Glu Cys Asn Thr Ile Pro Val
 465 470 475 480
 Tyr Met Pro Tyr Val Thr Ala Tyr Phe Met Pro Arg Ala Tyr Lys Asp
 485 490 495
 Arg Pro Leu Val Val Pro Asn Gly Ser Lys Asn Leu Ala Phe Ile Gly
 500 505 510
 Asn Phe Ala Glu Thr Ala Arg Asp Thr Val Phe Thr Thr Glu Tyr Ser
 515 520 525
 Val Arg Thr Ala Met Glu Ala Val Tyr Gln Leu Leu Asp Val Asp Arg
 530 535 540
 Gly Val Pro Glu Val Tyr Ala Ser Glu Phe Asp Ala Arg Val Leu Met
 545 550 555 560
 Asp Ala Phe Tyr Glu Leu Asn Asp Arg Lys Ser Leu His Glu Leu Val
 565 570 575
 Asn Lys Asn Phe Ile Lys Arg Ser Val Leu Asn Thr Val Leu Lys Lys
 580 585 590
 Ile Arg Gly Thr Phe Ile Glu Glu Leu Leu Arg Lys His Lys Leu Leu
 595 600 605

<210> 5517

<211> 311

<212> PRT

<213> S.epidermidis

<400> 5517

Met Phe His His Val Ser Val Met Leu Asn Glu Thr Ile Asp Tyr Leu
 1 5 10 15
 Asn Ile Lys Glu Asp Gly Val Tyr Val Asp Cys Thr Leu Gly Gly Ala
 20 25 30
 Gly His Ala Leu Tyr Leu Leu Asn Gln Leu Asn Asp Lys Gly Arg Leu
 35 40 45
 Ile Ala Ile Asp Gln Asp Leu Thr Ala Ile Glu Asn Ala Lys Glu Val
 50 55 60
 Leu Lys Glu His Leu His Lys Val Thr Phe Val His Asn Asn Phe Arg
 65 70 75 80
 Glu Leu Thr Asn Ile Leu Asn Glu Leu Glu Ile Glu Lys Val Asp Gly
 85 90 95
 Ile Tyr Tyr Asp Leu Gly Val Ser Ser Pro Gln Leu Asp Val Pro Glu
 100 105 110
 Arg Gly Phe Ser Tyr His Asn Asp Ala Lys Leu Asp Met Arg Met Asp
 115 120 125
 Gln Thr Gln Ser Leu Ser Ala Tyr Glu Val Val Asn Gln Trp Ser Tyr
 130 135 140
 Glu Ala Leu Val Arg Ile Phe Phe Arg Tyr Gly Glu Glu Lys Phe Ser

145 150 155 160
 Lys Gln Ile Ala Arg Arg Ile Glu Ala His Arg Glu Gln Gln Pro Ile
 165 170 175
 Glu Thr Thr Leu Glu Leu Val Asp Val Ile Lys Glu Gly Ile Pro Ala
 180 185 190
 Lys Ala Arg Arg Lys Gly Gly His Pro Ala Lys Arg Val Phe Gln Ala
 195 200 205
 Ile Arg Ile Ala Val Asn Asp Glu Leu Ser Ala Phe Glu Asp Ser Val
 210 215 220
 Glu Gln Ala Ile Glu Cys Val Lys Val Gly Gly Arg Ile Ser Val Ile
 225 230 235 240
 Thr Phe His Ser Leu Glu Asp Arg Leu Cys Lys Gln Ile Phe Gln Glu
 245 250 255
 Phe Glu Lys Gly Pro Asp Val Pro Arg Gly Leu Pro Val Ile Pro Glu
 260 265 270
 Ala Tyr Thr Pro Lys Leu Lys Arg Val Asn Arg Lys Pro Ile Thr Ala
 275 280 285
 Thr Asp Asp Asp Leu Asn Glu Asn Asn Arg Ala Arg Ser Ala Lys Leu
 290 295 300
 Arg Val Ala Glu Ile Leu Lys
 305 310

<210> 5518

<211> 202

<212> PRT

<213> S.epidermidis

<400> 5518

Val Met Ser His Asp Ala Asn Thr Ile Asp Ser Arg Thr His Glu Gly
 1 5 10 15
 Glu Leu Asn Lys Leu Gly Phe Trp Ile Phe Leu Thr Ala Glu Phe Ala
 20 25 30
 Leu Phe Gly Thr Leu Phe Ala Thr Leu Leu Thr Leu Gln His Gly Gly
 35 40 45
 Gly Tyr Gly Gly Lys Leu Thr Thr Asp Leu Phe Glu Leu His Leu Ile
 50 55 60
 Leu Ile Met Thr Phe Ala Leu Leu Ile Ser Ser Tyr Thr Cys Gly Ile
 65 70 75 80
 Ala Ile Tyr Tyr Met Arg Gln Glu Lys Gln Asn Leu Met Met Phe Trp
 85 90 95
 Met Ile Ile Thr Val Ile Leu Gly Leu Val Phe Val Gly Phe Glu Ile
 100 105 110
 Tyr Glu Phe Ala His Tyr Ala Ser Glu Gly Val Asn Pro Thr Ile Gly
 115 120 125
 Ser Phe Trp Ser Ser Phe Phe Ile Leu Leu Gly Thr His Gly Ala His
 130 135 140
 Val Ser Leu Gly Ile Val Trp Val Ile Cys Leu Leu Ile Gln Ile Gly
 145 150 155 160
 Thr Arg Gly Leu Asp Ser Tyr Asn Ala Pro Lys Leu Phe Ile Val Ser
 165 170 175
 Leu Tyr Trp His Phe Leu Asp Val Val Trp Val Phe Ile Phe Thr Ala
 180 185 190
 Val Tyr Met Ile Gly Met Val Tyr Ser Gly
 195 200

<210> 5519

<211> 297
 <212> PRT
 <213> S.epidermidis

<400> .5519

His	Met	Ile	Gln	Lys	Leu	Leu	Asn	Asp	Ile	Gln	Gln	Asp	Asp	Tyr	Ala
1				5					10					15	
Trp	Lys	Met	Asp	Val	Leu	Lys	Lys	Trp	Lys	Val	Asn	Thr	Leu	Phe	Glu
			20					25					30		
Arg	Trp	Lys	Lys	Arg	His	Thr	Phe	Val	Asp	Asp	Val	Asn	Ile	Ile	Thr
		35					40					45			
Lys	Leu	Leu	Leu	Gly	Ile	Ala	Leu	Phe	Phe	Phe	Ile	Ile	Phe	Ile	His
	50					55					60				
Asn	Phe	Asp	Phe	Met	Ile	Tyr	Ile	Val	Ile	Leu	Met	Phe	Met	Phe	Leu
65					70					75					80
Leu	Leu	Phe	Asn	Gly	Thr	Glu	Phe	Lys	Ile	Thr	Ala	Ile	Phe	Ile	Leu
				85					90					95	
Val	Thr	Thr	Leu	Phe	Ala	Leu	Met	Ser	Ser	Leu	Phe	Met	Ile	Leu	Tyr
			100					105					110		
Gly	Asp	Gly	Glu	His	Met	Leu	Val	Lys	Phe	Gly	Ile	Leu	Gln	Ile	Ser
		115					120						125		
Thr	Glu	Ser	Ile	Val	Arg	Gly	Leu	His	Leu	Ser	Met	Arg	Thr	Ile	Thr
	130					135					140				
Val	Ser	Ile	Phe	Gly	Ile	Leu	Ile	Ala	Leu	Thr	Ser	Gln	Ile	Val	Met
145					150					155					160
Ile	Phe	Tyr	Ser	Leu	Met	Gln	His	Leu	Lys	Val	Lys	Pro	Lys	Phe	Ala
				165					170					175	
Tyr	Ala	Phe	Met	Ala	Ala	Ile	Arg	Met	Val	Pro	Leu	Ile	Ile	Ser	Ser
			180					185					190		
Leu	Ile	Gln	Leu	Arg	Arg	Ser	Leu	Lys	Met	Arg	Tyr	Gln	Met	Ile	Asp
		195					200					205			
Ala	Ser	Asn	Tyr	Lys	Gly	Ile	Lys	Arg	Leu	Asn	His	Leu	Val	Ile	Pro
	210					215					220				
Leu	Leu	Ser	Gln	Asn	Ile	Arg	Arg	Ala	His	Gln	Leu	Ser	Val	Ala	Met
225					230					235					240
Glu	Ser	Lys	Gly	Phe	Lys	Asp	Gly	Pro	Arg	Thr	Tyr	Tyr	Tyr	Arg	Val
				245					250					255	
Pro	Phe	Ser	Tyr	Lys	Asp	Ile	Val	Phe	Ile	Ala	Cys	Ile	Leu	Ile	Ile
			260					265					270		
Ile	Thr	Leu	Ser	Phe	Val	Leu	Ser	Ser	Tyr	Leu	Pro	Ile	Thr	Gly	Ile
		275					280						285		
His	Asp	Val	Arg	Phe	Gly	Gln	Leu	Asp							
	290					295									

<210> 5520
 <211> 73
 <212> PRT
 <213> S.epidermidis

<400> 5520

Gly	Thr	Ala	His	Asn	Asp	Cys	Tyr	Phe	His	Phe	Val	His	Pro	Phe	Glu
1				5					10					15	
Thr	Phe	Gly	Leu	Leu	Leu	Gly	Ile	Val	Val	Tyr	Tyr	Thr	Tyr	Ser	Ile
			20					25					30		
Thr	Ile	His	Leu	Val	Phe	Phe	Asn	Gln	Lys	Ser	Asn	Phe	Asn	Ile	Asn
		35					40					45			

Leu Asn Ile Asn Leu Arg Leu Leu Thr Ile Ile Cys Phe Leu Ile Asn
 50 55 60
 Val Lys Val Lys Ile Leu Ile Asn Asn
 65 70

<210> 5521
 <211> 326
 <212> PRT
 <213> S.epidermidis

<400> 5521
 Ala Met Ala Gln Met Thr Met Val Gln Ala Ile Asn Asp Ala Leu Lys
 1 5 10 15
 Ser Glu Leu Lys Arg Asp Glu Asp Val Leu Val Phe Gly Glu Asp Val
 20 25 30
 Gly Val Asn Gly Gly Val Phe Arg Val Thr Glu Gly Leu Gln Lys Glu
 35 40 45
 Phe Gly Glu Asp Arg Val Phe Asp Thr Pro Leu Ala Glu Ser Gly Ile
 50 55 60
 Gly Gly Leu Ala Leu Gly Leu Ala Val Thr Gly Phe Arg Pro Val Met
 65 70 75 80
 Glu Ile Gln Phe Leu Gly Phe Val Tyr Glu Val Phe Asp Glu Val Ala
 85 90 95
 Gly Gln Ile Ala Arg Thr Arg Phe Arg Ser Gly Gly Thr Lys Pro Ala
 100 105 110
 Pro Val Thr Ile Arg Thr Pro Phe Gly Gly Gly Val His Thr Pro Glu
 115 120 125
 Leu His Ala Asp Asn Leu Glu Gly Ile Leu Ala Gln Ser Pro Gly Leu
 130 135 140
 Lys Val Val Ile Pro Ser Gly Pro Tyr Asp Ala Lys Gly Leu Leu Ile
 145 150 155 160
 Ser Ser Ile Gln Ser Asn Asp Pro Val Val Tyr Leu Glu His Met Lys
 165 170 175
 Leu Tyr Arg Ser Phe Arg Glu Glu Val Pro Glu Lys Glu Tyr Lys Ile
 180 185 190
 Asp Ile Gly Lys Ala Asn Val Lys Lys Glu Gly Asn Asp Ile Thr Leu
 195 200 205
 Ile Ser Tyr Gly Ala Met Val Gln Glu Ser Leu Lys Ala Ala Glu Glu
 210 215 220
 Leu Glu Lys Asp Gly Tyr Ser Val Glu Val Ile Asp Leu Arg Thr Val
 225 230 235 240
 Gln Pro Ile Asp Ile Asp Thr Leu Val Ala Ser Val Glu Lys Thr Gly
 245 250 255
 Arg Ala Val Val Gln Glu Ala Gln Arg Gln Ala Gly Val Gly Ala
 260 265 270
 Gln Val Ala Ala Glu Leu Ala Glu Arg Ala Ile Leu Ser Leu Glu Ala
 275 280 285
 Pro Ile Ala Arg Val Ala Ala Ser Asp Thr Ile Tyr Pro Phe Thr Gln
 290 295 300
 Ala Glu Asn Val Trp Leu Pro Asn Lys Lys Asp Ile Ile Glu Gln Ala
 305 310 315 320
 Lys Ala Thr Leu Glu Phe
 325

<210> 5522
 <211> 310

<212> PRT

<213> S.epidermidis

<400> 5522

```

Glu Gly Gly Leu Val Leu Glu Asn Tyr Asn Phe Asn Ile Ile Glu Gln
1      5      10      15
Ser Gln Val Gly Gln Arg Ile Asp Lys Leu Val Ser Asp Leu Asn Lys
20      25      30
Asp Trp Ser Arg Ser Gln Leu Gln Asp Trp Ile Lys Glu Gly Leu Val
35      40      45
Lys Val Asn Gly Lys Val Ile Lys Ser Asn Tyr Lys Val Lys Leu Asn
50      55      60
Asp Lys Ile Val Val Thr Glu Lys Glu Val Val Glu Ala Asp Ile Lys
65      70      75      80
Pro Glu Asn Leu Asn Leu Asp Ile Tyr Tyr Glu Asp Glu Asp Val Ala
85      90      95
Val Val Tyr Lys Pro Lys Gly Met Val Val His Pro Ser Pro Gly His
100     105     110
Tyr Ser Gly Thr Leu Val Asn Gly Leu Met Tyr Gln Ile Lys Asp Leu
115     120     125
Ser Gly Ile Asn Gly Glu Ile Arg Pro Gly Ile Val His Arg Ile Asp
130     135     140
Lys Asp Thr Ser Gly Leu Leu Met Val Ala Lys Asn Asp Val Ala His
145     150     155     160
Arg His Leu Val Glu Gln Leu Met Ser Lys Thr Val Lys Arg Lys Tyr
165     170     175
Thr Ala Leu Val His Gly Asn Ile Pro His Asp Tyr Gly Thr Ile Asp
180     185     190
Ala Pro Ile Gly Arg Asn Lys Asn Asp Arg Gln Ser Met Ala Val Val
195     200     205
Asp Asp Gly Lys Glu Ala Val Thr His Phe Asn Val Leu Glu His Phe
210     215     220
Lys Asp Tyr Thr Leu Ile Glu Cys Gln Leu Glu Thr Gly Arg Thr His
225     230     235     240
Gln Ile Arg Val His Met Lys Tyr Ile Gly Tyr Pro Leu Val Gly Asp
245     250     255
Pro Lys Tyr Gly Pro Lys Lys Thr Leu Asp Ile Asp Gly Gln Ala Leu
260     265     270
His Ala Gly Ile Ile Gly Phe Glu His Pro Val Thr His Glu Tyr Ile
275     280     285
Glu Lys His Ala Thr Leu Pro Asn Asp Phe Glu Lys Leu Leu Asp Asp
290     295     300
Ile Arg Arg Arg Asp Ala
305     310

```

<210> 5523

<211> 244

<212> PRT

<213> S.epidermidis

<400> 5523

```

Val Glu Lys Gln Lys Arg Thr Ser Tyr Thr Phe Ile Ile Lys His Tyr
1      5      10      15
Leu Asn Ser Tyr Gln Ser Arg Arg Ile Ile Met Pro Phe Thr Pro Ser
20      25      30
Glu Ile Lys Asn Lys Glu Phe Thr Arg Val Lys Asn Gly Leu Glu Pro

```

35 40 45
 Thr Glu Val Ala Asn Tyr Leu Glu Gln Leu Ser Asn Glu Ile Glu Arg
 50 55 60
 Leu Lys Glu Asp Lys Lys Gln Leu Glu Lys Val Ile Glu Asp Arg Asp
 65 70 75 80
 Ser Asn Ile Lys Ser Tyr Lys Asp Val His Gln Ser Val Ser Asp Ala
 85 90 95
 Leu Ile Gln Ala Gln Lys Val Gly Glu Glu Thr Lys Gln Ala Ala Thr
 100 105 110
 Lys Glu Ala Glu Ala Val Leu Ser Lys Ala Gln Val Gln Ala Asp Ser
 115 120 125
 Ile Val Asn Asp Ala Ile Glu Lys Ala Arg Arg Leu Ala Phe Gln Thr
 130 135 140
 Glu Asp Met Lys Arg Gln Ser Lys Val Phe Arg Ser Arg Phe Arg Met
 145 150 155 160
 Leu Val Glu Ala Gln Leu Asp Leu Leu Lys Ser Glu Asp Trp Asp Tyr
 165 170 175
 Leu Leu Asn Tyr Asp Leu Asp Ala Glu Gln Val Thr Leu Glu Asp Ile
 180 185 190
 His His Leu His Asp Asn Asp Leu Thr Pro Glu Glu Arg Ala Met Lys
 195 200 205
 Gln Lys Gln Asn Gln Glu Ile Ser Ala Asn Gln Pro Ser Thr Ser Ser
 210 215 220
 Ser Glu Ser Val Ser Gln Ser Asn Ala Asn Asn Glu Ser Ser Gln Ser
 225 230 235 240
 Thr Ser Asn Asn

<210> 5524

<211> 400

<212> PRT

<213> S.epidermidis

<400> 5524

Ile Met Lys His Ile Leu Leu Ala Val Thr Gly Gly Ile Ala Ala Tyr
 1 5 10 15
 Lys Ala Ile Asp Leu Thr Ser Lys Leu Ile Gln Ser Gly Tyr Asp Val
 20 25 30
 Arg Val Met Leu Ser Asp His Ala Gln Glu Phe Val Thr Pro Leu Ala
 35 40 45
 Phe Gln Ala Ile Ser Arg Asn Pro Val Tyr Thr Asn Thr Phe Lys Glu
 50 55 60
 Glu Asn Pro Glu Glu Ile Gln His Val Ser Leu Gly Asp Trp Ala Asp
 65 70 75 80
 Ala Ile Ile Val Ala Pro Ala Thr Ala Asn Thr Ile Ala Lys Leu Ser
 85 90 95
 Val Gly Ile Ala Asp Asp Leu Ile Thr Ser Thr Leu Leu Ala Thr Thr
 100 105 110
 Thr Pro Lys Phe Val Ala Pro Ala Met Asn Val Asn Met Tyr Asn Asn
 115 120 125
 Pro Arg Thr Lys His Asn Met Lys Val Leu Ser Gln Asp Gly Tyr Tyr
 130 135 140
 Phe Ile Glu Pro Gly Ser Gly Tyr Leu Ala Cys Gly Tyr Val Ala Lys
 145 150 155 160
 Gly Arg Met Glu Glu Pro Met Gln Ile Leu Ser Val Ile Asn Lys Phe
 165 170 175

Met Ser Ser Ser Ile Ile Asp Tyr Ala Lys Glu Val Tyr Gln Ile Asn
65 70 75 80
Leu Lys Val Ala Glu Ala Leu Ser Gly Thr Val Thr Pro Gln Gly Phe
85 90 95
Phe Ala Ile Ile Lys Lys Pro Thr Tyr Asp Lys Thr Leu Ala Lys Gln
100 105 110
Val Leu Leu Ile Asp Arg Ile Gln Asp Pro Gly Asn Leu Gly Thr Leu
115 120 125
Ile Arg Thr Ala Asp Ala Ala Gly Leu Asp Leu Ile Val Met Glu Lys
130 135 140
Gly Thr Ala Asp Pro Phe Gln Asp Lys Val Ile Arg Ala Ser Gln Gly
145 150 155 160
Ser Ile Phe His Ile Pro Val Ile Phe Asp Asp Ile Asn Asn Tyr Ile
165 170 175
His Gln Phe Asn Gly Pro Val Tyr Gly Thr Ala Leu Glu Asn Ala Val
180 185 190
Ser Phe Asn Asp Val Glu Ala Gln Val Asn Phe Ala Leu Ile Leu Gly
195 200 205
Asn Glu Gly Glu Gly Val Asn Pro Asp Leu Leu Lys Glu Thr Thr Gln
210 215 220
Asn Leu Thr Ile Pro Ile Tyr Gly Lys Ala Glu Ser Leu Asn Val Ala
225 230 235 240
Ile Ala Gly Ser Ile Leu Met Tyr Gln Leu Lys Gly
245 250

<210> 5527

<211> 210

<212> PRT

<213> S.epidermidis

<400> 5527

Leu Leu Thr His Asn Phe Pro Arg Glu Gly Cys Ala Phe Phe Arg Arg
1 5 10 15
Met Phe Phe Met Ser Lys Gly Leu Lys Leu Ser Glu Ile Leu Val Thr
20 25 30
Val Leu Ile Ser Val Val Phe Ala Ile Ile Tyr Asn Leu Trp Trp Phe
35 40 45
Val Tyr Asn Ile Val Gln Val Ala Gly Ile His Leu Glu Gln Leu Thr
50 55 60
Tyr Gly Val Trp Phe Met Ala Ala Val Val Cys Tyr Leu Ile Ile Pro
65 70 75 80
Lys Pro Gly Ile Ala Leu Leu Ala Glu Ile Ala Ala Gly Ala Gly Glu
85 90 95
Thr Ile Val Met Gly Lys Phe Asp Ile Pro Thr Ile Ile Tyr Ala Ile
100 105 110
Leu Gln Gly Leu Ala Cys Glu Ile Ile Phe Ala Ile Phe Lys Tyr Lys
115 120 125
Ser Arg Ser Ala Ala Val Ala Met Leu Ala Gly Leu Ala Thr Ala Leu
130 135 140
Ile Ser Phe Pro Val Asp Tyr Phe Tyr Gly Tyr Leu Asn Glu Val Ala
145 150 155 160
Gly Trp Asn Leu Leu Leu Phe Ile Val Phe Arg Ser Ile Ser Gly Ile
165 170 175
Val Leu Ala Gly Leu Val Ser Tyr Trp Ile Val Lys Ala Leu Asp Lys
180 185 190
Thr Gly Val Thr Lys Phe Phe Arg Pro Ala Ser Gln Gln Asp Tyr Asp

	195					200					205				
Asn	Leu														
	210														
<210> 5528															
<211> 407															
<212> PRT															
<213> S.epidermidis															
<400> 5528															
Ser	Val	Arg	Gln	Thr	Ile	Lys	Met	Lys	Leu	Asn	Lys	Phe	Lys	Val	
1				5					10					15	
Phe	Phe	Ile	Ile	Val	Leu	Leu	Thr	Leu	Val	Val	Ser	Ile	Gly	Ile	
			20					25					30	Leu	
Gly	Val	Glu	Trp	Thr	Arg	His	Leu	Glu	Leu	Lys	Lys	Gln	Thr	Leu	
		35					40					45		Ser	
Gln	Glu	Ser	Gly	Asn	Thr	Asn	Tyr	Ile	Glu	Lys	Arg	Asp	Lys	Thr	
	50					55					60			Val	
Glu	Lys	Pro	Lys	Lys	Ile	Lys	Thr	Lys	Tyr	Asp	Lys	Lys	Asp	Pro	
65					70					75				80	
Ser	Lys	Ser	Ile	Asn	Lys	Tyr	Leu	Glu	Lys	Thr	Gln	Phe	Asn	Gly	
				85					90					95	
Val	Ala	Val	Phe	Asp	Asn	Gly	Lys	Val	Lys	Met	Asn	Lys	Gly	Tyr	
			100					105					110	Gly	
Tyr	Gln	Asp	Ile	Glu	Lys	Gly	Lys	Lys	Asn	Thr	Ala	Asn	Thr	Met	
		115					120					125		Tyr	
Leu	Ile	Gly	Ser	Ala	Gln	Lys	Phe	Thr	Thr	Gly	Leu	Met	Leu	Lys	
	130					135					140			Gln	
Leu	Glu	Val	Glu	Asn	Lys	Val	Asn	Leu	Gln	Asp	Ser	Val	Thr	Lys	
145					150					155				160	
Ile	Pro	Trp	Phe	Lys	Thr	Asn	Lys	Glu	Ile	Thr	Ile	Lys	Asp	Leu	
				165					170					175	
Leu	His	Lys	Ser	Gly	Leu	Tyr	Lys	Tyr	Glu	Ala	Ser	Thr	Asn	Ile	
			180					185					190	Lys	
Asn	Leu	Glu	Gln	Ala	Val	Arg	Ala	Ile	Gln	Ala	Arg	Gly	Ile	Asp	
		195					200					205		Asp	
Thr	Val	Tyr	His	Lys	His	Gln	Tyr	Asn	Asp	Ala	Asn	Tyr	Leu	Val	
	210					215					220			Leu	
Ala	Lys	Val	Ile	Glu	Asn	Val	Thr	Gly	Lys	Pro	Tyr	Val	Lys	Asn	
225					230					235				240	
Tyr	Glu	Arg	Leu	Gly	Asn	Lys	Tyr	Asn	Leu	Lys	His	Thr	Ala	Phe	
				245					250					255	
Asp	Glu	Lys	Pro	Leu	Gln	Ser	Glu	Met	Ala	Lys	Gly	Tyr	Lys	Phe	
			260					265					270	Lys	
Asn	Asn	Thr	Phe	Ser	Phe	Leu	Lys	Pro	Asn	Ile	Leu	Asp	Gln	Tyr	
		275					280					285		Tyr	
Gly	Ala	Gly	Asn	Leu	Tyr	Met	Thr	Pro	His	Asp	Met	Gly	Lys	Leu	
	290					295					300			Ile	
Tyr	Thr	Leu	Gln	Gln	Asn	Lys	Ile	Phe	Asn	Ala	Arg	Gln	Thr	Arg	
305					310					315				320	
Ile	Leu	His	Glu	Phe	Gly	Thr	Gln	Glu	Tyr	Pro	Glu	Glu	Tyr	Arg	
				325					330					335	
Gly	Phe	Tyr	Ile	Thr	Pro	Tyr	Leu	Asn	Arg	Val	Asn	Gly	Val	Phe	
			340												

Gly Thr Asn Val Ser Asn Thr Pro Gly Leu Val Ser Asn Glu Asp Lys
 370 375 380
 Met Arg His Ile Phe Tyr Asn Ile Leu Asp Gln Lys Lys Pro Tyr Asn
 385 390 395 400
 Thr Ala Gly Val Lys Val Glu
 405

<210> 5529
 <211> 99
 <212> PRT
 <213> S.epidermidis

<400> 5529
 Asn His Phe Asn Pro Arg Ser Gly Glu Ile Ser Met Gly Glu Phe Lys
 1 5 10 15
 Asn Arg Ile Asn Val Thr Ile Asn Asp Gln His Phe Thr Ile Ile Gly
 20 25 30
 Glu Asp Ser Pro Glu His Ile Arg Tyr Val Ala His Leu Val Asp Glu
 35 40 45
 Lys Met Gln Glu Leu Gly Gln Lys Ser Ala Gly Leu Asp Thr Thr Arg
 50 55 60
 Lys Ala Ile Leu Thr Ser Val Asn Ile Met His Glu Lys Val Ile Leu
 65 70 75 80
 Glu Glu Glu Asn Arg Arg Leu Gln Gln Glu Ile Asn Gln Leu Lys Gln
 85 90 95
 Arg Asp Glu

<210> 5530
 <211> 222
 <212> PRT
 <213> S.epidermidis

<400> 5530
 Ile Asn Phe Lys Ser Leu Cys Tyr Asn Ile His Asn His Ile Lys Arg
 1 5 10 15
 Arg His Ile Met Thr Gln Tyr Thr Phe Ser Pro Lys Asp Phe Lys Ala
 20 25 30
 Phe Glu Val Glu Gly Leu Asp Gln Arg Met Glu Ala Leu Asn Asp Tyr
 35 40 45
 Val Arg Pro Gln Leu His Gln Leu Gly Ser Tyr Phe Glu Glu Tyr Phe
 50 55 60
 Thr Thr Gln Thr Gly Glu Thr Phe Tyr Ala His Val Ala Lys His Ala
 65 70 75 80
 Arg Arg Ser Val Asn Pro Pro Ile Asp Thr Trp Val Ala Phe Ala Pro
 85 90 95
 Asn Lys Arg Gly Tyr Lys Met Leu Pro His Phe Gln Ile Gly Leu Phe
 100 105 110
 Arg Asn Gln Leu Phe Ile Met Phe Gly Ile Met His Glu Gly Arg Asn
 115 120 125
 Lys Glu Glu Lys Val Lys Ile Phe Asp Lys His Phe Asp Lys Leu Thr
 130 135 140
 Ser Leu Pro Ser Asp Tyr Ser Val Ser Leu Asp His Met Lys Thr Glu
 145 150 155 160
 Lys His Tyr Ile Lys Asp Met Ser Asn Glu Glu Leu His Ala Ala Ile
 165 170 175

Asp Arg Val Lys Asn Val Lys Lys Gly Glu Phe Phe Val Ala Arg Thr
 180 185 190
 Leu Ser Pro Thr Asp Lys Arg Leu Lys Ser Asp Lys Ser Phe Leu Lys
 195 200 205
 Phe Val Glu Glu Thr Phe Asp Glu Phe Leu Lys Phe Tyr Gln
 210 215 220

<210> 5531

<211> 290

<212> PRT

<213> S.epidermidis

<400> 5531

Glu Trp Phe Lys Val Val Ala Lys Ile Leu Asp Gly Lys Gln Ile Ala
 1 5 10 15
 Lys Glu Tyr Arg Gln Arg Leu Lys Asn Gln Val Asn Asp Leu Lys Glu
 20 25 30
 Tyr Gly Phe Thr Pro Lys Leu Ser Val Ile Leu Val Gly Asn Asp Gly
 35 40 45
 Ala Ser Gln Ser Tyr Val Lys Ser Lys Lys Lys Ala Ala Glu Lys Ile
 50 55 60
 Gly Met Ile Ser Glu Ile Ile His Leu Asp Glu Ser Thr Ser Glu Glu
 65 70 75 80
 Val Val Leu Ser Glu Leu Asn Arg Leu Asn Asn Asp Asp Thr Val Ser
 85 90 95
 Gly Ile Leu Val Gln Val Pro Leu Pro Lys Gln Val Ser Glu Gln Lys
 100 105 110
 Val Leu Glu Ala Ile Asn Pro Glu Lys Asp Val Asp Gly Phe His Pro
 115 120 125
 Ile Asn Ile Gly Lys Leu Tyr Ile Asp Glu Gln Thr Phe Val Pro Cys
 130 135 140
 Thr Pro Leu Gly Ile Met Glu Ile Leu Lys His Ala Asp Ile Asn Leu
 145 150 155 160
 Glu Gly Lys Asn Ala Val Val Ile Gly Arg Ser His Ile Val Gly Gln
 165 170 175
 Pro Val Ser Lys Leu Leu Leu Gln Ala Asn Ala Thr Val Thr Ile Leu
 180 185 190
 His Ser Arg Thr Lys Asn Met Asn Ala His Leu Lys Gln Ala Asp Val
 195 200 205
 Ile Val Ser Ala Val Gly Gln Pro Gly Leu Val Thr Lys Glu Asn Val
 210 215 220
 Lys Lys Gly Ala Val Ile Ile Asp Val Gly Asn Thr Pro Asp Glu Asn
 225 230 235 240
 Gly Lys Leu Lys Gly Asp Val Ala Tyr Asp Glu Val Lys Glu Ile Ala
 245 250 255
 Ser Ala Ile Thr Pro Val Pro Gly Gly Val Gly Pro Leu Thr Ile Thr
 260 265 270
 Met Val Leu Asn Asn Thr Leu Leu Ala Glu Lys Leu Arg Arg Gly Leu
 275 280 285
 Thr Lys
 290

<210> 5532

<211> 45

<212> PRT

<213> S.epidermidis

<400> 5532

Ser Ser Leu Lys Asn Ile Tyr Lys Ile Glu Lys Ala Ser Asp Ile Arg
 1 5 10 15
 Asn Lys Gln Tyr Ala Arg Leu Thr Pro Ile Leu Thr Arg Cys Thr Met
 20 25 30
 Phe Thr Val Ser Tyr Ala Ser Val Phe Ile Ser Tyr Gln
 35 40 45

<210> 5533

<211> 67

<212> PRT

<213> S.epidermidis

<400> 5533

Met Glu Val Asn Lys Val Ile Tyr Ile Leu Leu Ala Val Phe Leu Gly
 1 5 10 15
 Ser Phe Gly Ile His Lys Phe Tyr Ala Gly Lys Pro Ile Gln Gly Leu
 20 25 30
 Leu His Ile Leu Phe Cys Trp Thr Ala Ile Pro His Val Leu Ala Ile
 35 40 45
 Ile Ser Ala Val Leu Thr Leu Phe Lys Pro Ala Asp Ala Asn Gly Asn
 50 55 60
 Val Arg Met
 65

<210> 5534

<211> 370

<212> PRT

<213> S.epidermidis

<400> 5534

Met Ala Pro Lys Leu Gln Ala Gln Phe Asp Ala Val Lys Val Leu Asn
 1 5 10 15
 Glu Thr Gln Ser Lys Phe Glu Met Val Gln Ile Leu Asp Glu Asp Gly
 20 25 30
 Asn Val Val Asn Glu Asp Leu Val Pro Asp Leu Thr Asp Glu Gln Leu
 35 40 45
 Val Glu Leu Met Glu Arg Met Val Trp Thr Arg Ile Leu Asp Gln Arg
 50 55 60
 Ser Ile Ser Leu Asn Arg Gln Gly Arg Leu Gly Phe Tyr Ala Pro Thr
 65 70 75 80
 Ala Gly Gln Glu Ala Ser Gln Leu Ala Ser Gln Tyr Ala Leu Glu Ser
 85 90 95
 Glu Asp Phe Ile Leu Pro Gly Tyr Arg Asp Val Pro Gln Ile Ile Trp
 100 105 110
 His Gly Leu Pro Leu Thr Asp Ala Phe Leu Phe Ser Arg Gly His Phe
 115 120 125
 Lys Gly Asn Gln Phe Pro Glu Gly Val Asn Ala Leu Ser Pro Gln Ile
 130 135 140
 Ile Ile Gly Ala Gln Tyr Ile Gln Thr Ala Gly Val Ala Phe Gly Leu
 145 150 155 160
 Lys Lys Arg Gly Lys Asn Ala Val Ala Ile Thr Tyr Thr Gly Asp Gly
 165 170 175
 Gly Ser Ser Gln Gly Asp Phe Tyr Glu Gly Ile Asn Phe Ala Ser Ala
 180 185 190

Tyr Lys Ala Pro Ala Ile Phe Val Ile Gln Asn Asn Asn Tyr Ala Ile
 195 200 205
 Ser Thr Pro Arg Ser Lys Gln Thr Ala Ala Glu Thr Leu Ala Gln Lys
 210 215 220
 Ala Ile Ser Val Gly Ile Pro Gly Ile Gln Val Asp Gly Met Asp Ala
 225 230 235 240
 Leu Ala Val Tyr Gln Ala Thr Leu Glu Ala Arg Glu Arg Ala Val Ala
 245 250 255
 Gly Glu Gly Pro Thr Val Ile Glu Thr Leu Thr Tyr Arg Tyr Gly Pro
 260 265 270
 His Thr Met Ala Gly Asp Asp Pro Thr Arg Tyr Arg Thr Ser Asp Glu
 275 280 285
 Asp Ala Glu Trp Glu Lys Lys Asp Pro Leu Val Arg Phe Arg Lys Tyr
 290 295 300
 Leu Glu Ala Lys Gly Leu Trp Asn Glu Asp Lys Glu Asn Glu Val Val
 305 310 315 320
 Glu Arg Ala Lys Ser Glu Ile Lys Ala Ala Ile Lys Glu Ala Asp Asn
 325 330 335
 Thr Glu Lys Gln Thr Val Thr Ser Leu Met Asp Ile Met Tyr Glu Glu
 340 345 350
 Met Pro Gln Asn Leu Ala Glu Gln Tyr Glu Ile Tyr Lys Glu Lys Glu
 355 360 365
 Ser Lys
 370

<210> 5535

<211> 46

<212> PRT

<213> S.epidermidis

<400> 5535

Glu Ile Thr Lys Asn Thr Met Ser Glu Ile Gln Val Lys Thr Arg Cys
 1 5 10 15
 Asp Phe Leu Asp Cys Lys Lys Pro His Val Thr Gln Asn Asp His Lys
 20 25 30
 Pro Leu Ala Lys Trp Lys Thr Thr Ala Met Thr Gln Ile Met
 35 40 45

<210> 5536

<211> 281

<212> PRT

<213> S.epidermidis

<400> 5536

Val Met Ala Asn Gln Ser Leu Lys Glu Thr Pro Lys Thr Gln Ser Asn
 1 5 10 15
 Pro Gln Thr Gln Val Gln Gly Gln Asn Gln Gln Pro Lys Gln Lys Thr
 20 25 30
 Val Lys Leu Ile Ile Lys Arg Gln Asp Asn Ser Glu Ser Lys Pro Tyr
 35 40 45
 Glu Glu Ser Phe Glu Ile Pro Tyr Lys Glu Asn Leu Asn Val Ile Ala
 50 55 60
 Cys Leu Met Glu Ile Arg Arg Asn Pro Val Asn Ser Lys Gly Glu Lys
 65 70 75 80
 Thr Thr Pro Val Thr Trp Asp Met Asn Cys Leu Glu Glu Val Cys Gly
 85 90 95

Ala Cys Ser Met Val Ile Asn Gly Arg Ala Arg Gln Ser Cys Ser Ala
 100 105 110
 Ile Val Asp Gln Leu Glu Gln Pro Ile Arg Leu Glu Pro Met Ser Thr
 115 120 125
 Phe Pro Val Ile Arg Asp Leu Gln Val Asp Arg Ser Arg Met Phe Asp
 130 135 140
 Asn Leu Lys Arg Met Lys Ala Trp Ile Pro Ile Asp Gly Thr Tyr Asp
 145 150 155 160
 Leu Gly Pro Gly Pro Arg Met Pro Glu Lys Lys Arg Gln Thr Ala Tyr
 165 170 175
 Glu Leu Ser Lys Cys Met Thr Cys Gly Val Cys Leu Glu Val Cys Pro
 180 185 190
 Asn Val Thr Lys Asn Asn Lys Phe Val Gly Ala Gln Ala Ile Ser Gln
 195 200 205
 Val Arg Leu Phe Asp Leu His Pro Thr Gly Ser Met Thr Lys Asp Glu
 210 215 220
 Arg Leu Asp Ala Leu Met Ser Ala Gly Gly Leu Gln Glu Cys Gly Asn
 225 230 235 240
 Ser Gln Asn Cys Val Asn Ala Cys Pro Lys Gly Ile Pro Leu Thr Thr
 245 250 255
 Ser Ile Ala Ala Met Asn Arg Glu Thr Ser Phe His Met Phe Lys Ser
 260 265 270
 Phe Phe Gly Ser Asp His Gln Val Asp
 275 280

<210> 5537

<211> 246

<212> PRT

<213> S.epidermidis

<400> 5537

Val Val Ala Asn Gln Lys Lys Lys Glu Met Val His Asp Phe Gln Gln
 1 5 10 15
 Lys Phe Thr Asp Lys Met Lys Ser Leu Gly Leu His Phe Lys Asn Ile
 20 25 30
 Asp Leu Tyr Gln Gln Ala Phe Ser His Ser Ser Phe Ile Asn Asp Phe
 35 40 45
 Asn Met Asn Arg Leu Glu His Asn Glu Arg Leu Glu Phe Leu Gly Asp
 50 55 60
 Ala Val Leu Glu Leu Thr Val Ser Arg Tyr Leu Phe Asp Arg His Pro
 65 70 75 80
 His Leu Pro Glu Gly Asn Leu Thr Lys Met Arg Ala Thr Ile Val Cys
 85 90 95
 Glu Pro Ser Leu Val Ile Phe Ala Asn Lys Ile Lys Leu Asn Glu Leu
 100 105 110
 Ile Leu Leu Gly Lys Gly Glu Glu Lys Thr Gly Gly Arg Thr Arg Pro
 115 120 125
 Ser Leu Ile Ser Asp Ala Phe Glu Ala Phe Val Gly Ala Leu Tyr Leu
 130 135 140
 Asp Gln Gly Leu Asp Ser Val Trp Thr Phe Ala Glu Lys Val Ile Phe
 145 150 155 160
 Pro Tyr Val Glu Asp Asp Glu Leu Val Gly Val Val Asp Phe Lys Thr
 165 170 175
 Gln Phe Gln Glu Tyr Val His Ser Gln Asn Lys Gly Asp Val Thr Tyr
 180 185 190
 Gln Leu Ile Lys Glu Glu Gly Pro Ala His His Arg Leu Phe Thr Ser

2300

	195					200				205									
Glu	Val	Ile	Leu	Glu	Asn	Lys	Ala	Val	Ala	Glu	Gly	Lys	Gly	Lys	Thr				
	210					215					220								
Lys	Lys	Glu	Ser	Glu	Gln	Lys	Ala	Ala	Glu	Gln	Ala	Tyr	Lys	Leu	Met				
225					230					235					240				
Lys	Asn	Lys	Lys	Ser	Leu														
				245															

<210> 5538

<211> 269

<212> PRT

<213> S.epidermidis

<400> 5538

Lys	Glu	Asn	Lys	Met	Phe	His	Asn	Lys	Asn	Ala	Asn	Phe	Val	Asn	Gly				
1				5					10					15					
Val	Thr	Ile	Asn	Ile	Lys	Asp	Lys	Glu	Thr	Ile	Lys	Thr	Phe	Tyr	Glu				
			20					25					30						
Asn	Val	Leu	Gly	Phe	Asn	Leu	Ile	Asn	Glu	Ser	Glu	Thr	Ala	Val	Gln				
		35					40					45							
Phe	Glu	Val	Gly	Asp	Ser	Asn	Gln	Phe	Ile	Thr	Phe	Ile	Glu	Ile	Gln				
	50					55					60								
Asn	Gly	Arg	Glu	Pro	Leu	Met	Ser	Glu	Ala	Gly	Leu	Phe	His	Ile	Gly				
65					70				75					80					
Ile	Leu	Leu	Pro	Thr	Leu	Thr	Thr	Leu	Ala	Asp	Leu	Leu	Val	His	Leu				
			85					90					95						
Ser	Asp	Phe	Glu	Val	Pro	Val	Asn	Gly	Gly	Gln	Gln	Ser	Val	Ala	Thr				
		100						105					110						
Cys	Leu	Phe	Ile	Glu	Asp	Pro	Glu	Gly	Asn	Ala	Ile	Lys	Phe	Tyr	Val				
	115						120					125							
Asp	Arg	Glu	Thr	Glu	Ser	Trp	Ile	Asp	Glu	Lys	Glu	Gly	Arg	Ile	Arg				
	130					135					140								
Met	Asp	Ile	Ala	Pro	Ile	Asn	Val	Pro	Arg	Leu	Leu	Gln	Asn	Val	Ser				
145					150				155					160					
His	Thr	Gln	Trp	Gln	Gly	Ile	Pro	Asp	Glu	Thr	Lys	Leu	Gly	Ser	Leu				
			165					170					175						
His	Ile	Lys	Ser	Ile	Arg	Ile	Ser	Asp	Val	Lys	Ser	Tyr	Tyr	Leu	Asn				
		180						185					190						
Tyr	Phe	Gly	Leu	Glu	Glu	Ser	Ala	Tyr	Met	Asp	Asp	Tyr	Ser	Leu	Phe				
	195					200					205								
Leu	Ser	Ser	Asn	Glu	Tyr	Tyr	Asn	His	Leu	Ala	Val	Asn	Gln	Trp	Leu				
	210					215					220								
Ser	Ala	Thr	Lys	Arg	Val	Asp	Asn	Glu	His	Thr	Tyr	Gly	Leu	Ala	Met				
225					230					235					240				
Ile	Asp	Phe	His	Tyr	Pro	Lys	Thr	Thr	His	Lys	Asn	Leu	Lys	Gly	Pro				
			245					250						255					
Asp	Gly	Ile	Tyr	Phe	Arg	Phe	Asn	Arg	Ile	Lys	Glu	Val							
		260						265											

<210> 5539

<211> 215

<212> PRT

<213> S.epidermidis

<400> 5539

Arg Asn Asp Asn Val Lys Ile Asn Leu Leu Cys Ser Gln Arg Leu Leu

bioRxiv preprint doi: <https://doi.org/10.1101/000000>; this version posted January 1, 2014. The copyright holder for this preprint (which was not certified by peer review) is the author/funder, who has granted bioRxiv a license to display the preprint in perpetuity. It is made available under aCC-BY-NC-ND 4.0 International license.


```

1           5           10           15
Pro Asn His Ile Phe Glu Lys Glu Lys Asp Ser Asn Trp Ala Gly Ile
                20                25                30
Asp Arg Gly Ala Leu Ile Leu Val Lys Gln Gly Ile Gln Pro Ile Phe
                35                40                45
Ser Val Gly Asp Phe Asp Ser Val Asn Asn Glu Glu Arg Leu Met Leu
                50                55                60
Met Lys Asn Leu Gln Ile Glu Pro Val Glu Ala Glu Lys Asp Asp Thr
65                70                75                80
Asp Leu Ala Leu Gly Val Ala Gln Ala Val Glu Arg Gly Tyr Thr Glu
                85                90                95
Ile Thr Ile Tyr Gly Ala Thr Gly Gly Arg Leu Asp His Phe Met Gly
                100               105               110
Val Leu Gln Ile Leu Gln Lys Pro Gln Tyr Leu His Gln Ser Ile Lys
                115               120               125
Ile Lys Val Ile Asp Gln Gln Asn His Ile Gln Leu Leu Asn Glu Gly
130               135               140
Lys Tyr Val Ile Asn Arg Asp Ser Thr Tyr Pro Tyr Ile Ser Phe Ile
145               150               155               160
Pro Leu Asn Asp Lys Thr Ile Leu Thr Leu Gln Gly Phe Lys Tyr Asn
                165               170               175
Leu Asn Gln Glu His Leu Asn Leu Gly Ser Thr Leu Thr Ile Ser Asn
                180               185               190
Glu Val Lys Val Asn Glu Ala Ile Ile Arg Val Glu Gln Gly Thr Val
195               200               205
Leu Lys Ile Arg Ser Arg Asp
210               215

```

<210> 5540

<211> 210

<212> PRT

<213> S.epidermidis

<400> 5540

```

Val Ile Asp Lys Glu Ser Val Met Ile Phe Lys Glu Tyr Leu Arg Leu
1           5           10           15
Gly Thr Lys Met Arg Gly Glu Arg Leu Lys Leu Lys Lys Asn Asp Arg
                20                25                30
Arg Val Ala Ile Lys Glu Ala Ile Glu Leu Asn Pro Phe Ile Thr Asp
                35                40                45
Tyr Glu Leu Cys Glu Lys Phe Asp Val Ser Ile Gln Thr Ile Arg Leu
50                55                60
Asp Arg Thr His Leu Asn Ile Pro Glu Leu Arg Lys Arg Ile Lys Leu
65                70                75                80
Val Ala Glu Gln Asn Tyr Gly Arg Ile Lys Ser Ile Glu Ala Asn Glu
                85                90                95
Ile Ile Gly Asp Leu Ile Gln Val Asn Pro Asp Val Ser Ala Gln Ser
100               105               110
Leu Ile Glu Ile Thr Ile Asp Ser Val Phe Ala Lys Ser Glu Ile Ala
115               120               125
Arg Gly His Val Leu Phe Ala Gln Ala Asn Ser Leu Cys Val Ala Leu
130               135               140
Ile His Lys Pro Ile Val Leu Thr His Glu Ser Gln Val Glu Phe Lys
145               150               155               160
Glu Lys Val Lys Leu Asn Asp Thr Val Arg Ala Asp Ala Arg Val Ile
                165               170               175

```

Asp Ile Thr Asp Lys His Tyr Ile Ile Glu Val Asn Ser Tyr Val Ser
 180 185 190
 Asp Met Leu Val Phe Lys Gly Lys Phe Lys Met Tyr Tyr Thr Ser Glu
 195 200 205
 Asp Glu
 210

<210> 5541
 <211> 208
 <212> PRT
 <213> S.epidermidis

<400> 5541
 Gly Met Asp Lys Glu Lys Gly Leu Leu Ile Val Leu Ser Gly Pro Ser
 1 5 10 15
 Gly Val Gly Lys Gly Thr Val Arg Lys Lys Ile Phe Glu Asp Pro Thr
 20 25 30
 Thr Ser Tyr Lys Tyr Ser Ile Ser Met Thr Thr Arg His Met Arg Glu
 35 40 45
 Gly Glu Ile Asp Gly Val Asp Tyr Phe Phe Lys Thr Lys Glu Glu Phe
 50 55 60
 Glu Ala Leu Ile Lys Asp Asp Gln Phe Ile Glu Tyr Ala Gln Tyr Val
 65 70 75 80
 Gly Asn Tyr Tyr Gly Thr Pro Val Gln Tyr Val Lys Asp Thr Met Glu
 85 90 95
 Glu Gly His Asp Val Phe Leu Glu Ile Glu Val Glu Gly Ala Lys Gln
 100 105 110
 Val Arg Lys Lys Phe Pro Asp Ala Leu Phe Ile Phe Leu Ala Pro Pro
 115 120 125
 Ser Leu Asp Asp Leu Lys Glu Arg Leu Val Gly Arg Gly Thr Glu Ser
 130 135 140
 Asp Glu Lys Ile Gln Ser Arg Val Asn Glu Ala Arg Lys Glu Val Glu
 145 150 155 160
 Met Met Asn Leu Tyr Asp Tyr Val Val Val Asn Asp Glu Val Glu Leu
 165 170 175
 Ala Lys Asn Arg Ile Gln Ser Ile Val Glu Ala Glu His Leu Lys Arg
 180 185 190
 Glu Arg Ile Glu Ala Lys Tyr Arg Lys Met Leu Leu Glu Val Lys Lys
 195 200 205

<210> 5542
 <211> 516
 <212> PRT
 <213> S.epidermidis

<400> 5542
 Phe Arg Arg Lys Asn Lys Arg Lys Arg Phe Arg Tyr Gln Thr Lys Met
 1 5 10 15
 Gly Arg Gly Tyr Ser Ser Met Ser Asn Tyr Ser Gly Leu Asn Glu Glu
 20 25 30
 Cys Gly Val Phe Gly Ile Trp Asn His Pro Glu Ala Ala Gln Leu Thr
 35 40 45
 Tyr Met Gly Leu His Ser Leu Gln His Arg Gly Gln Glu Gly Ala Gly
 50 55 60
 Ile Val Val Ser Asn His Glu Thr Leu Lys Gly Glu Arg Gly Leu Gly
 65 70 75 80

<210> 5543
 <211> 473
 <212> PRT
 <213> S.epidermidis

<400> 5543

Trp	Arg	Gly	Lys	Asn	Met	Val	Val	Gly	Asp	Phe	Pro	Ile	Glu	Thr	Asp
1				5					10					15	
Thr	Ile	Val	Ile	Gly	Ala	Gly	Pro	Gly	Gly	Tyr	Val	Ala	Ala	Ile	Arg
			20					25					30		
Ala	Ala	Gln	Leu	Gly	Gln	Lys	Val	Thr	Ile	Val	Glu	Lys	Gly	Asn	Leu
		35					40					45			
Gly	Gly	Val	Cys	Leu	Asn	Val	Gly	Cys	Ile	Pro	Ser	Lys	Ala	Leu	Leu
		50				55					60				
His	Ala	Ser	His	Arg	Phe	Val	Glu	Ala	Gln	Asn	Ser	Glu	Asn	Leu	Gly
65					70					75				80	
Val	Ile	Ala	Glu	Ser	Val	Ser	Leu	Asn	Tyr	Gln	Lys	Val	Gln	Glu	Phe
				85					90					95	
Lys	Thr	Ser	Val	Val	Asn	Lys	Leu	Thr	Gly	Gly	Val	Glu	Gly	Leu	Leu
			100					105					110		
Lys	Gly	Asn	Lys	Val	Glu	Ile	Val	Arg	Gly	Glu	Ala	Tyr	Phe	Val	Asp
		115					120					125			
Asn	Asn	Ser	Leu	Arg	Val	Met	Asp	Glu	Lys	Ser	Ala	Gln	Thr	Tyr	Asn
		130				135					140				
Phe	Lys	His	Ala	Ile	Ile	Ala	Thr	Gly	Ser	Arg	Pro	Ile	Glu	Ile	Pro
145					150					155					160
Asn	Phe	Glu	Phe	Gly	Lys	Arg	Val	Ile	Asp	Ser	Thr	Gly	Ala	Leu	Asn
				165					170					175	
Leu	Gln	Glu	Val	Pro	Asn	Lys	Leu	Val	Val	Val	Gly	Gly	Gly	Tyr	Ile
			180					185					190		
Gly	Ser	Glu	Leu	Gly	Thr	Ala	Phe	Ala	Asn	Phe	Gly	Ser	Glu	Val	Thr
		195					200					205			
Ile	Leu	Glu	Gly	Ala	Lys	Asp	Ile	Leu	Gly	Gly	Phe	Glu	Lys	Gln	Met
	210					215					220				
Thr	Gln	Pro	Val	Lys	Lys	Gly	Met	Lys	Glu	Lys	Gly	Ile	Glu	Ile	Val
225					230					235				240	
Thr	Glu	Ala	Met	Ala	Lys	Ser	Ala	Glu	Glu	Thr	Glu	Asn	Gly	Val	Lys
				245					250					255	
Val	Thr	Tyr	Glu	Ala	Lys	Gly	Glu	Glu	Gln	Thr	Ile	Glu	Ala	Asp	Tyr
			260					265					270		
Val	Leu	Val	Thr	Val	Gly	Arg	Arg	Pro	Asn	Thr	Asp	Glu	Leu	Gly	Leu
		275					280					285			
Glu	Glu	Leu	Gly	Leu	Lys	Phe	Ala	Asp	Arg	Gly	Leu	Leu	Glu	Val	Asp
	290					295					300				
Lys	Gln	Ser	Arg	Thr	Ser	Ile	Glu	Asn	Ile	Phe	Ala	Ile	Gly	Asp	Ile
305					310					315				320	
Val	Pro	Gly	Leu	Pro	Leu	Ala	His	Lys	Ala	Ser	Tyr	Glu	Gly	Lys	Val
				325					330					335	
Ala	Ala	Glu	Ala	Ile	Asp	Gly	Gln	Ala	Ala	Glu	Val	Asp	Tyr	Ile	Gly
			340					345					350		
Met	Pro	Ala	Val	Cys	Phe	Thr	Glu	Pro	Glu	Leu	Ala	Gln	Val	Gly	Tyr
		355					360					365			
Thr	Glu	Ala	Gln	Ala	Lys	Glu	Glu	Gly	Leu	Ser	Ile	Lys	Ala	Ser	Lys
	370					375					380				
Phe	Pro	Tyr	Ala	Ala	Asn	Gly	Arg	Ala	Leu	Ser	Leu	Asp	Asp	Thr	Asn

Gly Lys Tyr Lys Val Lys Tyr Gln Val Thr Asp Ser Asp Gly Ala Glu
 85 90 95
 Lys Thr Ser Ile Arg Asn Ile Glu Val Lys
 100 105

<210> 5547
 <211> 173
 <212> PRT
 <213> S.epidermidis

<400> 5547
 Arg Val Asn Asn Met Ser Lys Trp Ile Ile Leu Ser Asp Asn His Lys
 1 5 10 15
 Glu Thr Gly Ile Leu Tyr His Ile Tyr Glu Leu His Lys Asp Ala Asp
 20 25 30
 Lys Phe Leu His Leu Gly Asp Ser Glu Phe Ser Tyr Asn Asp Thr Glu
 35 40 45
 Leu Ser Leu Tyr Gln Arg Val Lys Gly Asn Cys Asp Phe Tyr Pro Glu
 50 55 60
 Phe Leu Glu Glu Glu Ile Thr Glu Glu Asn Gly Ile Arg Ala Phe Tyr
 65 70 75 80
 Thr His Gly His Leu Tyr Gln Val Asn Gln Thr Arg Met Lys Leu Ala
 85 90 95
 Glu Lys Ala Lys Glu Leu Gly Cys Leu Phe Ala Phe Tyr Gly His Thr
 100 105 110
 His Val Ala Lys Tyr Glu Gln Ile Gly Gly Ile His Val Ile Asn Pro
 115 120 125
 Gly Ser Ile Ser Gln Ser Arg Ser Gln Ile Glu Glu Thr Phe Ala Glu
 130 135 140
 Leu Val Tyr Lys Glu Asp Glu Asn Thr Ile Ile Leu Asn Phe Arg Asn
 145 150 155 160
 Arg Glu Asn Gln Ile Ile Glu Thr Val Lys Ile Glu Phe
 165 170

<210> 5548
 <211> 42
 <212> PRT
 <213> S.epidermidis

<400> 5548
 Ile Tyr Leu Asn Leu Tyr Gln Leu Leu Thr Ile Asn Gly Tyr Leu Asn
 1 5 10 15
 Asp Ala His Glu Ile Ile Asn Ile Tyr Lys Val Phe Ile Leu Thr Val
 20 25 30
 Leu Ser Ile Tyr Glu Cys His Phe Glu Asn
 35 40

<210> 5549
 <211> 81
 <212> PRT
 <213> S.epidermidis

<400> 5549
 Leu Leu Leu Asn Val Thr Phe Lys Leu Asp Lys Glu Phe Leu Ser Asp
 1 5 10 15
 Phe Lys Leu Val Leu Tyr Ala Ile Gln Leu Phe Tyr Asn Leu Leu Val

```
<210> 5550
<211> 334
<212> PRT
<213> S.epidermidis
```

<400>	5550														
Lys 1	Glu	Leu	Lys 5	Leu	Glu	Ser	Glu	Glu	Lys 10	Glu	Ile	Tyr	Met	Ile 15	Phe
Ile	Tyr	Ala	Ile 20	Ile	Ala	Leu	Leu	Ile 25	Thr	Phe	Ile	Leu	Val 30	Pro	Ile
Leu	Ile	Pro 35	Thr	Leu	Lys	Arg	Met 40	Lys	Phe	Gly	Gln	Ser 45	Ile	Arg	Glu
Glu	Gly 50	Pro	Gln	Ser	His	Met 55	Lys	Lys	Thr	Gly	Thr 60	Pro	Thr	Met	Gly
Gly 65	Leu	Thr	Phe	Leu	Ile 70	Ser	Ile	Ile	Ile	Thr 75	Ser	Ile	Ile	Ala	Ile 80
Ile	Phe	Val	Asp 85	His	Ser	Asn	Pro	Ile 90	Ile	Leu	Leu	Leu	Phe 95	Val	Thr
Ile	Gly	Phe	Gly 100	Leu	Ile	Gly	Phe	Ile 105	Asp	Asp	Tyr	Ile	Ile 110	Val	Val
Lys	Lys	Asn 115	Asn	Gln	Gly	Leu	Thr 120	Ser	Lys	Gln	Lys	Phe 125	Leu	Ala	Gln
Ile	Ile 130	Ile	Ala	Val	Ile	Phe 135	Phe	Val	Leu	Ser	Asp 140	Val	Phe	His	Leu
Val 145	His	Phe	Thr	Thr	Asp 150	Leu	His	Ile	Pro	Phe 155	Val	Asn	Phe	Asp	Ile 160
Pro	Leu	Ser	Phe	Ala 165	Tyr	Val	Ile	Phe	Ile 170	Val	Phe	Trp	Gln	Val 175	Gly
Phe	Ser	Asn 180	Ala	Val	Asn	Leu	Thr	Asp 185	Gly	Leu	Asp	Gly	Leu 190	Ala	Thr
Gly	Leu	Ser 195	Ile	Ile	Gly	Phe	Ala 200	Met	Tyr	Ala	Val	Met 205	Ser	Tyr	Met
Leu	Asp 210	Ser	Pro	Ala	Ile	Gly 215	Ile	Phe	Cys	Ile	Ile 220	Met	Ile	Phe	Ala
Leu 225	Leu	Gly	Phe	Leu	Pro 230	Tyr	Asn	Leu	Asn	Pro 235	Ala	Lys	Val	Phe	Met 240
Gly	Asp	Thr	Gly	Ser 245	Leu	Ala	Leu	Gly	Gly 250	Ile	Phe	Ala	Thr	Ile 255	Ser
Ile	Met	Leu	Asn 260	Gln	Glu	Leu	Ser	Leu 265	Ile	Leu	Ile	Gly	Phe 270	Val	Phe
Val	Val	Glu 275	Thr	Leu	Ser	Val	Met 280	Leu	Gln	Val	Ala	Ser 285	Tyr	Lys	Leu
Thr	Lys 290	Lys	Arg	Ile	Phe	Lys 295	Met	Ser	Pro	Ile	His 300	His	His	Phe	Glu
Leu 305	Ser	Gly	Trp	Gly	Glu 310	Trp	Lys	Val	Val	Thr 315	Val	Phe	Trp	Thr	Val 320

<400> 5556

Asn	Leu	Val	Lys	Leu	Leu	Glu	Phe	Asn	Lys	Tyr	Asn	Ala	His	Asn	Lys
1				5					10					15	
Asn	Ile	Leu	Met	Trp	Arg	Ile	Asn	Phe	Lys	Thr	Leu	Lys	Val	Arg	Pro
			20					25					30		
Leu	Arg	Ser	Phe	Leu	Val	Thr	Thr	Thr	Tyr	Phe					
		35					40								

<210> 5557

<211> 1037

<212> PRT

<213> S.epidermidis

<400> 5557

Arg	Ile	Ser	Lys	Lys	Arg	Ser	Val	Lys	Ser	Met	Pro	Lys	Arg	Asp	Asp
1				5					10					15	
Ile	Lys	Thr	Ile	Leu	Val	Val	Gly	Ser	Gly	Pro	Ile	Ile	Ile	Gly	Gln
			20					25					30		
Ala	Ala	Glu	Phe	Asp	Tyr	Ala	Gly	Thr	Gln	Ala	Cys	Leu	Ala	Leu	Lys
		35					40					45			
Glu	Glu	Gly	Tyr	Arg	Val	Ile	Leu	Val	Asn	Ser	Asn	Pro	Ala	Thr	Ile
	50					55					60				
Met	Thr	Asp	Lys	Glu	Ile	Ala	Asp	Lys	Val	Tyr	Ile	Glu	Pro	Leu	Thr
65					70					75				80	
His	Asp	Phe	Ile	Ala	Arg	Ile	Ile	Arg	Lys	Glu	Gln	Pro	Asp	Ala	Leu
				85					90					95	
Leu	Pro	Thr	Leu	Gly	Gly	Gln	Thr	Gly	Leu	Asn	Met	Ala	Ile	Gln	Leu
			100					105					110		
His	Asp	Ser	Gly	Val	Leu	Glu	Ala	Asn	Asn	Val	Lys	Leu	Leu	Gly	Thr
		115					120					125			
Glu	Leu	Glu	Ser	Ile	Gln	Gln	Ala	Glu	Asp	Arg	Glu	Met	Phe	Arg	Thr
	130					135					140				
Leu	Met	Asn	Asp	Leu	Asn	Val	Pro	Val	Pro	Glu	Ser	Asp	Ile	Val	Asn
145					150					155				160	
Thr	Val	Glu	Gln	Ala	Phe	Glu	Phe	Lys	Glu	Gln	Val	Gly	Tyr	Pro	Leu
				165					170					175	
Ile	Val	Arg	Pro	Ala	Phe	Thr	Met	Gly	Gly	Thr	Gly	Gly	Gly	Ile	Cys
			180					185					190		
His	Asn	Asp	Ala	Glu	Leu	Lys	Glu	Val	Val	Ser	Asn	Gly	Leu	His	Tyr
	195						200					205			
Ser	Pro	Ala	Thr	Gln	Cys	Leu	Ile	Glu	Lys	Ser	Ile	Ala	Gly	Tyr	Lys
	210					215					220				
Glu	Ile	Glu	Tyr	Glu	Val	Met	Arg	Asp	Lys	Asn	Asp	Asn	Ala	Ile	Val
225					230					235				240	
Val	Cys	Asn	Met	Glu	Asn	Ile	Asp	Pro	Val	Gly	Ile	His	Thr	Gly	Asp
				245					250					255	
Ser	Ile	Val	Val	Ala	Pro	Ser	Gln	Thr	Leu	Ser	Asp	Val	Glu	Tyr	Gln
		260						265					270		
Met	Leu	Arg	Asp	Val	Ser	Leu	Lys	Val	Ile	Arg	Ala	Leu	Gly	Ile	Glu
		275					280					285			
Gly	Gly	Cys	Asn	Val	Gln	Leu	Ala	Leu	Asp	Pro	His	Ser	Leu	Asn	Tyr
	290					295					300				
Tyr	Ile	Ile	Glu	Val	Asn	Pro	Arg	Val	Ser	Arg	Ser	Ser	Ala	Leu	Ala
305					310					315				320	
Ser	Lys	Ala	Thr	Gly	Tyr	Pro	Ile	Ala	Lys	Leu	Ala	Ala	Lys	Ile	Ala

				325					330					335			
Val	Gly	Leu	Thr	Leu	Asp	Glu	Met	Leu	Asn	Pro	Ile	Thr	Gly	Thr	Ser		
			340						345					350			
Tyr	Ala	Ala	Phe	Glu	Pro	Thr	Leu	Asp	Tyr	Val	Ile	Ser	Lys	Ile	Pro		
		355						360					365				
Arg	Phe	Pro	Phe	Asp	Lys	Phe	Glu	Lys	Gly	Glu	Arg	Glu	Leu	Gly	Thr		
	370					375						380					
Gln	Met	Lys	Ala	Thr	Gly	Glu	Val	Met	Ala	Ile	Gly	Arg	Thr	Tyr	Glu		
385					390					395					400		
Glu	Ser	Leu	Leu	Lys	Ala	Ile	Arg	Ser	Leu	Glu	Tyr	Gly	Val	His	His		
				405					410					415			
Leu	Gly	Leu	Pro	Asn	Gly	Glu	Ser	Tyr	Glu	Leu	Asp	Tyr	Ile	Lys	Glu		
			420					425					430				
Arg	Ile	Gly	His	Gln	Asp	Asp	Glu	Arg	Leu	Phe	Phe	Ile	Gly	Glu	Ala		
		435					440					445					
Ile	Arg	Arg	Gly	Thr	Ser	Leu	Glu	Glu	Leu	His	Asn	Met	Thr	Lys	Ile		
	450					455					460						
Asp	Tyr	Phe	Phe	Leu	Asn	Lys	Phe	Gln	Asn	Ile	Ile	Asp	Ile	Glu	His		
465					470				475						480		
Glu	Leu	Lys	Asn	His	Gln	Gly	Asp	Leu	Glu	Tyr	Leu	Lys	Tyr	Ala	Lys		
				485					490					495			
Asp	Tyr	Gly	Phe	Ser	Asp	Lys	Val	Ile	Ala	His	Arg	Trp	Asp	Lys	Glu		
			500					505					510				
Glu	Lys	Asp	Ile	Tyr	Gln	Leu	Arg	Met	Ser	Gln	Asn	Ile	Lys	Pro	Val		
		515					520					525					
Tyr	Lys	Met	Val	Asp	Thr	Cys	Ala	Ala	Glu	Phe	Glu	Ser	Thr	Thr	Pro		
	530					535					540						
Tyr	Tyr	Tyr	Gly	Thr	Tyr	Glu	Tyr	Glu	Asn	Glu	Ser	Ile	Val	Thr	Asp		
545					550					555					560		
Lys	Glu	Lys	Ile	Leu	Val	Leu	Gly	Ser	Gly	Pro	Ile	Arg	Ile	Gly	Gln		
				565					570					575			
Gly	Val	Glu	Phe	Asp	Tyr	Ala	Thr	Val	His	Ala	Val	Trp	Ala	Ile	Gln		
			580					585					590				
Asn	Ala	Asp	Tyr	Glu	Ala	Ile	Ile	Val	Asn	Asn	Asn	Pro	Glu	Thr	Val		
		595					600					605					
Ser	Thr	Asp	Phe	Ser	Ile	Ser	Asp	Lys	Leu	Tyr	Phe	Glu	Pro	Leu	Thr		
	610					615					620						
Glu	Glu	Asp	Val	Met	Asn	Ile	Ile	Asn	Leu	Glu	Gln	Pro	Lys	Gly	Val		
625					630				635						640		
Val	Val	Gln	Phe	Gly	Gly	Gln	Thr	Ala	Ile	Asn	Leu	Ala	Asp	Lys	Leu		
				645				650					655				
Ala	Gln	His	Gly	Val	Lys	Ile	Leu	Gly	Thr	Ser	Leu	Glu	Asp	Leu	Asn		
			660					665					670				
Arg	Ala	Glu	Asp	Arg	Lys	Glu	Phe	Glu	Ala	Leu	Leu	Arg	Glu	Ile	Ala		
		675					680					685					
Val	Pro	Gln	Pro	Gln	Gly	Lys	Thr	Ala	Thr	Ser	Pro	Lys	Glu	Ala	Leu		
	690					695					700						
Glu	Asn	Ala	Arg	Glu	Ile	Gly	Tyr	Pro	Val	Val	Arg	Pro	Ser	Tyr			
705					710				715					720			
Val	Leu	Gly	Gly	Arg	Ala	Met	Glu	Ile	Val	Asp	Asn	Asp	Gln	Glu	Leu		
				725					730				735				
Glu	Asn	Tyr	Met	Thr	Gln	Ala	Val	Lys	Ala	Ser	Pro	Glu	His	Pro	Val		
			740					745				750					
Leu	Val	Asp	Arg	Tyr	Leu	Thr	Gly	Lys	Glu	Ile	Glu	Val	Asp	Ala	Ile		
		755					760				765						
Ser	Asp	Gly	Glu	Thr	Val	Val	Ile	Pro	Gly	Ile	Met	Glu	His	Ile	Glu		

770		775		780
Arg Ala Gly Val His Ser	Gly Asp Ser Ile Ala Val Tyr Pro Pro Gln			
785		790		800
Thr Leu Thr Gln Asp Glu Ile Asn Thr Leu Glu Asp Tyr Thr Ile Lys				
	805		810	815
Leu Ala Lys Gly Leu Asn Ile Lys Gly Leu Ile Asn Ile Gln Phe Val				
	820		825	830
Ile Ala His Asp Gly Val Tyr Val Leu Glu Val Asn Pro Arg Ser Ser				
	835		840	845
Arg Thr Val Pro Phe Leu Ser Lys Ile Thr Asp Ile Gln Met Ala Gln				
	850		855	860
Leu Ala Met Arg Ala Ile Met Gly Glu Thr Leu Ala Glu Ile Gly Phe				
	865		870	875
Lys Gln Gly Ile Gln Pro Tyr Ser Glu Gly Val Tyr Val Lys Ala Pro				
	885		890	895
Val Phe Ser Phe Asn Lys Leu Lys Asn Val Asp Ile Thr Leu Gly Pro				
	900		905	910
Glu Met Lys Ser Thr Gly Glu Val Met Gly Lys Asp Leu Thr Leu Glu				
	915		920	925
Lys Ala Leu Tyr Lys Gly Leu Thr Gly Ser Gly Phe Glu Val Lys Asp				
	930		935	940
His Gly Thr Val Leu Met Thr Val Ser Asp Lys Asp Lys Asp Glu Ile				
	945		950	955
Val Lys Ile Ala His Arg Leu Asn Glu Ile Gly Tyr Lys Ile Leu Ala				
	965		970	975
Thr Arg Gly Thr Ala Gln Lys Leu Lys Asp His Asn Ile Pro Val Glu				
	980		985	990
Val Val Gly Lys Ile Gly Gly Glu Asp Asp Leu Leu Thr Arg Ile Gln				
	995		1000	1005
Asn Gly Glu Val Gln Ile Val Phe Phe Phe Phe Tyr Ser Arg Lys Arg				
	1010		1015	1020
Tyr Arg Thr Arg Trp Ile Pro Asn Ser Thr Tyr Asn Ser				
1025		1030		1035

<210> 5558

<211> 318

<212> PRT

<213> S.epidermidis

<400> 5558

Lys Ser Thr Lys Lys Glu Arg Ile Gln Leu Met Gly Asn Val Val Tyr	
1	5 10 15
Lys Leu Thr Ser Lys Glu Ile Gln Ser Leu Met Ala Gln Thr Thr Phe	
	20 25 30
Glu Thr Thr Lys Leu Pro Gln Gly Met Lys Ala Arg Thr Arg Tyr Gln	
	35 40 45
Asn Thr Val Ile Asn Ile Tyr Ser Ser Gly Lys Val Met Phe Gln Gly	
	50 55 60
Lys Asn Ala Asp Gln Leu Ala Ser Gln Leu Leu Pro Asp Lys Gln Ser	
	65 70 75 80
Thr Thr Gly Lys His Thr Ser Ser Asn Thr Thr Ser Ile Gln Tyr Asn	
	85 90 95
Arg Phe His Cys Ile Gly Ser Asp Glu Ala Gly Ser Gly Asp Tyr Phe	
	100 105 110
Gly Pro Leu Thr Val Cys Ala Ala Tyr Val Ser Gln Ser His Ile Lys	
	115 120 125

```

Ile Leu Lys Glu Leu Gly Val Asp Asp Ser Lys Lys Leu Asn Asp Thr
 130                      135                      140
Lys Ile Val Asp Leu Ala Glu Gln Leu Ile Thr Phe Ile Pro His Ser
145                      150                      155                      160
Leu Leu Thr Leu Asp Asn Val Lys Tyr Asn Glu Arg Gln Ser Ile Gly
                      165                      170                      175
Trp Ser Gln Val Lys Met Lys Ala Val Leu His Asn Glu Ala Ile Lys
                      180                      185                      190
Asn Val Leu Gln Lys Ile Glu Gln Asp Gln Leu Asp Tyr Ile Val Ile
                      195                      200                      205
Asp Gln Phe Ala Lys Arg Glu Val Tyr Gln His Tyr Ala Leu Ser Ala
210                      215                      220
Leu Pro Phe Pro Asp Lys Thr Lys Phe Glu Thr Lys Gly Glu Ser Lys
225                      230                      235                      240
Ser Leu Ala Ile Ala Ala Ala Ser Ile Ile Ser Arg Tyr Ala Phe Val
                      245                      250                      255
Lys His Met Asp His Ile Ser Lys Lys Leu His Met Glu Ile Pro Lys
                      260                      265                      270
Gly Ala Ser Asn Lys Val Asp Leu Ile Ala Ala Lys Val Ile Gln Lys
                      275                      280                      285
Tyr Asp Ile Gln Gln Leu Asp Thr Ile Ser Lys Lys His Phe Lys Asn
290                      295                      300
Arg Asp Lys Ala Ile His Leu Met Asn Gln Lys Tyr Asn Lys
305                      310                      315

```

<210> 5559

<211> 56

<212> PRT

<213> S.epidermidis

<400> 5559

```

Met Lys Ala Lys Pro Lys Met Ile Val Thr Leu Ala Trp Asn Val Ile
 1                      5                      10                      15
Leu Val Tyr Arg Val Thr Lys Thr Ala Lys Ser Val Ser Thr Ile Glu
                      20                      25                      30
Ala Ile Lys Pro Thr Val Cys Phe Thr Ile Val Phe Ile Arg Tyr Thr
                      35                      40                      45
Pro Ser Leu Ser Tyr Ile Arg Gln
50                      55

```

<210> 5560

<211> 338

<212> PRT

<213> S.epidermidis

<400> 5560

```

Arg Arg Ala Asn Val Met Ala Phe Glu Gly Leu Ser Asp Arg Leu Gln
 1                      5                      10                      15
Ala Thr Met Gln Lys Met Arg Gly Lys Gly Lys Val Thr Glu Ala Asp
                      20                      25                      30
Ile Lys Thr Met Met Arg Glu Val Arg Leu Ala Leu Leu Glu Ala Asp
                      35                      40                      45
Val Asn Phe Lys Val Val Lys Glu Phe Val Lys Asn Val Ser Glu Arg
50                      55                      60
Ala Leu Gly Ser Asp Val Met Gln Ser Leu Thr Pro Gly Gln Gln Val
65                      70                      75                      80

```

Ile Lys Ile Val Gln Glu Glu Leu Thr Ser Leu Met Gly Gly Glu Asn
 85 90 95
 Thr Ser Ile Lys Met Ala Asn Lys Pro Pro Thr Val Val Met Met Val
 100 105 110
 Gly Leu Gln Gly Ala Gly Lys Thr Thr Thr Ala Gly Lys Leu Ala Leu
 115 120 125
 Leu Met Arg Lys Lys Tyr Asn Lys Lys Pro Leu Leu Val Ala Gly Asp
 130 135 140
 Ile Tyr Arg Pro Ala Ala Ile Asp Gln Leu Gln Thr Val Gly Lys Gln
 145 150 155 160
 Ile Asp Ile Pro Val Tyr Ser Glu Gly Asp Gln Val Ser Pro Gln Gln
 165 170 175
 Ile Val Glu Asn Ala Leu Lys His Ala Lys Glu Glu His Leu Asp Phe
 180 185 190
 Val Ile Ile Asp Thr Ala Gly Arg Leu His Ile Asp Glu Ala Leu Met
 195 200 205
 Asn Glu Leu Gln Glu Val Lys Glu Ile Ser Lys Pro Asp Glu Ile Met
 210 215 220
 Leu Val Val Asp Ala Met Thr Gly Gln Asp Ala Val Asn Val Ala Gln
 225 230 235 240
 Ser Phe Asp Glu Gln Leu Asp Val Ser Gly Val Thr Leu Thr Lys Leu
 245 250 255
 Asp Gly Asp Thr Arg Gly Gly Ala Ala Leu Ser Ile Arg Ser Val Thr
 260 265 270
 Gln Lys Pro Ile Lys Phe Val Gly Met Ser Glu Lys Leu Asp Gly Leu
 275 280 285
 Glu Leu Phe His Pro Glu Arg Met Ala Ser Arg Ile Leu Gly Met Gly
 290 295 300
 Asp Val Leu Ser Leu Ile Glu Lys Ala Gln Gln Asp Val Asp Gln Glu
 305 310 315 320
 Lys Ala Lys Asp Leu Glu Lys Lys Met Arg Glu Ser Ser Ser Ser Leu
 325 330 335
 Asn Leu

<210> 5561

<211> 138

<212> PRT

<213> S.epidermidis

<400> 5561

Arg Phe Lys Asn Lys Thr Leu Lys Phe Ser Gly Gly Thr Asp Met Thr
 1 5 10 15
 Leu Glu Ile Ser Asn Asp Tyr Gly Lys Ile Asp Ile Ser Asn Asp Val
 20 25 30
 Ile Ala Ser Val Val Gly Gly Lys Ala Val Glu Ser Tyr Gly Ile Val
 35 40 45
 Gly Met Ala Ser Arg Gln Gln Val Arg Asp Gly Ile Ala Glu Ile Leu
 50 55 60
 Gly His Asp Asn Tyr Ala Lys Gly Ile Lys Val Arg Glu Asp Asn Gly
 65 70 75 80
 Ile Ile Asp Val Asp Met Tyr Ile Ile Val Ser Tyr Gly Val Lys Ile
 85 90 95
 Ser Glu Val Ala Ser Asn Leu Gln Ser Thr Val Lys Tyr Thr Leu Glu
 100 105 110
 Lys Thr Leu Asn Val Lys Val Asn Ser Ile Asn Ile Phe Val Gln Gly

Phe Asn Lys Ala His Ile Pro Phe Tyr Thr Leu Ser Asp Tyr Asn Glu
 165 170 175
 Leu Ile Glu Val Ala Lys Asp Glu Gly Lys Ile Ser Leu Asn Asp Ile
 180 185 190
 Gln Thr Leu Val Asp Trp Arg Asp Asn Leu Ser
 195 200

<210> 5565

<211> 40

<212> PRT

<213> S.epidermidis

<400> 5565

Tyr Asn Lys Lys Phe Leu His Val Ser Val Tyr Phe Lys Lys Ile Asn
 1 5 10 15
 Phe Lys Leu Leu Ile Lys Tyr Asn Lys Lys Ala Gln Asn Glu Phe His
 20 25 30
 Phe Gly Leu Ile Phe Val Lys Leu
 35 40

<210> 5566

<211> 373

<212> PRT

<213> S.epidermidis

<400> 5566

Gln Asp Lys Lys Lys Gly Lys Leu Glu Met Ile Thr Ala Glu Lys Lys
 1 5 10 15
 Lys Arg Asn Lys Phe Leu Pro Asn Phe Glu Lys Gln Ser Ile Tyr Ser
 20 25 30
 Leu Arg Tyr Asp Glu Met Gln Gln Trp Leu Ile Asp His Gly Gln Gln
 35 40 45
 Lys Phe Arg Ala Lys Gln Ile Phe Glu Trp Leu Tyr Gln Lys Arg Val
 50 55 60
 Asn Thr Ile Asp Glu Met Thr Asn Leu Ser Lys Glu Leu Arg Gln Ile
 65 70 75 80
 Leu Lys Asp His Phe Ala Met Thr Thr Leu Thr Thr Val Val Lys Gln
 85 90 95
 Glu Ser Lys Asp Gly Thr Ile Lys Phe Leu Phe Glu Leu Gln Asp Gly
 100 105 110
 Tyr Thr Ile Glu Thr Val Leu Met Arg His Glu Tyr Gly Asn Ser Val
 115 120 125
 Cys Val Thr Thr Gln Val Gly Cys Arg Ile Gly Cys Thr Phe Cys Ala
 130 135 140
 Ser Thr Leu Gly Gly Leu Lys Arg Asn Leu Glu Ala Gly Glu Ile Val
 145 150 155 160
 Ser Gln Val Leu Thr Val Gln Lys Ala Leu Asp Glu Thr Asn Glu Arg
 165 170 175
 Val Ser Gln Ile Val Ile Met Gly Ile Gly Glu Pro Phe Glu Asn Tyr
 180 185 190
 Asp Glu Met Met Asp Phe Leu Arg Ile Val Asn Asp Asp Asn Ser Leu
 195 200 205
 Asn Ile Gly Ala Arg His Ile Thr Val Ser Thr Ser Gly Ile Ile Pro
 210 215 220
 Arg Ile Tyr Asp Phe Ala Glu Glu Asp Ile Gln Ile Asn Phe Ala Val
 225 230 235 240

Ser Leu His Gly Ala Lys Asp Glu Ile Arg Ser Arg Leu Met Pro Ile
 245 250 255
 Asn Arg Ala Tyr Asn Val Asp Lys Leu Met Glu Ala Ile Arg Tyr Tyr
 260 265 270
 Gln Glu Lys Thr Asn Arg Arg Val Thr Phe Glu Tyr Gly Leu Phe Gly
 275 280 285
 Gly Val Asn Asp Gln Leu Glu His Ala Arg Asp Leu Ala His Leu Ile
 290 295 300
 Lys Asn Leu Asn Cys His Val Asn Leu Ile Pro Val Asn His Val Pro
 305 310 315 320
 Glu Arg Asn Tyr Val Lys Thr Pro Lys Asp Asp Ile Phe Lys Phe Glu
 325 330 335
 Lys Glu Leu Lys Arg Leu Gly Ile Asn Ala Thr Ile Arg Arg Glu Gln
 340 345 350
 Gly Ser Asp Ile Asp Ala Ala Cys Gly Gln Leu Arg Ala Lys Glu Arg
 355 360 365
 Gln Val Glu Thr Arg
 370

<210> 5567

<211> 74

<212> PRT

<213> S.epidermidis

<400> 5567

Lys Ile Lys Lys Glu Pro His Ser Met Arg Leu Leu Phe Val Ile Ala
 1 5 10 15
 Ser Trp Glu Gly Phe Glu Pro Pro Thr Asp Gly Leu Glu Gly His Cys
 20 25 30
 Ser Ile Gln Leu Ser Tyr Gln Asp Ile Phe Asn Thr Arg Ile Ile Ile
 35 40 45
 Ser Lys Tyr Met Ser Phe Ser Asn Arg Tyr Leu Ile Lys Ile Ile Tyr
 50 55 60
 Ile Phe His Tyr Asn Arg Gly Phe Tyr Thr
 65 70

<210> 5568

<211> 408

<212> PRT

<213> S.epidermidis

<400> 5568

Tyr Met Lys Asn Phe Lys Asn Ile Met Arg Tyr Ile Gly Lys Thr Ser
 1 5 10 15
 Lys Phe Ile Asp Tyr Pro Leu Leu Ile Thr Tyr Val Val Leu Cys Leu
 20 25 30
 Ile Gly Leu Val Met Val Tyr Ser Ala Ser Met Val Ala Ala Thr Lys
 35 40 45
 Gly Thr Leu Thr Gly Gly Val Pro Val Ser Gly Thr Tyr Phe Tyr Asn
 50 55 60
 Arg Gln Leu Leu Tyr Val Ile Met Ser Phe Val Ile Val Phe Phe Met
 65 70 75 80
 Ala Phe Ile Met Asn Val Lys Val Leu Lys Lys Pro Asn Val Gln Lys
 85 90 95
 Gly Met Met Ile Gly Ile Phe Ile Leu Leu Leu Leu Thr Leu Val Ile
 100 105 110

Gly Lys Asn Ile Asn Gly Ser Lys Ser Trp Ile Asn Leu Gly Phe Met
 115 120 125
 Asn Leu Gln Ala Ser Glu Leu Leu Lys Ile Ser Ile Ile Leu Tyr Ile
 130 135 140
 Pro Phe Met Ile Glu Lys Lys Met Pro Ala Val Arg His Asn Ile Lys
 145 150 155 160
 Leu Ile Leu Gly Pro Ile Leu Phe Val Val Thr Cys Leu Ile Leu Val
 165 170 175
 Leu Phe Gln Lys Asp Val Gly Gln Thr Met Leu Ile Val Ile Ile Phe
 180 185 190
 Phe Ser Ile Ile Phe Tyr Ser Gly Ile Gly Val Gln Asn Met Leu Lys
 195 200 205
 Trp Gly Ala Leu Val Ala Ile Gly Phe Ile Ile Val Ala Thr Phe Met
 210 215 220
 Phe Met Leu Asp Met Val Pro Ser Tyr Leu Gln Ala Arg Phe Ser Thr
 225 230 235 240
 Leu Thr Asn Pro Phe Ser Gln Glu Ser Gly Thr Gly Tyr His Ile Ser
 245 250 255
 Asn Ser Leu Leu Ala Ile Gly Asn Gly Gly Leu Phe Gly Arg Gly Leu
 260 265 270
 Gly Asn Ser Ile Met Lys Leu Gly Tyr Leu Pro Glu Pro His Thr Asp
 275 280 285
 Phe Ile Phe Ala Ile Ile Cys Glu Glu Met Gly Leu Ile Gly Gly Leu
 290 295 300
 Ile Val Leu Ile Leu Glu Tyr Phe Ile Val Tyr Arg Ala Phe Gln Leu
 305 310 315 320
 Ala Asn Lys Thr Gln Ser Tyr Phe Tyr Lys Leu Val Cys Val Gly Ile
 325 330 335
 Ala Ser Tyr Ile Gly Ser Gln Thr Phe Val Asn Ile Gly Gly Ile Ser
 340 345 350
 Ala Thr Ile Pro Leu Thr Gly Val Pro Leu Pro Phe Ile Ser Phe Gly
 355 360 365
 Gly Ser Ser Met Ile Ser Leu Ser Ile Ala Met Gly Leu Leu Leu Ile
 370 375 380
 Thr Ala Lys Gln Ile Lys Gln Asp Asp Lys Arg Leu Lys Gln Arg Lys
 385 390 395 400
 Val Asp Ile Lys Arg Arg Tyr Asn
 405

<210> 5569

<211> 366

<212> PRT

<213> S.epidermidis

<400> 5569

Met Leu Glu Lys Arg Tyr Leu Val Leu Glu Asp Gly Ser Tyr Tyr Glu
 1 5 10 15
 Gly Tyr Arg Leu Gly Ser Asp Asp Leu Ser Ile Gly Glu Ile Val Phe
 20 25 30
 Asn Thr Ala Met Thr Gly Tyr Gln Glu Thr Ile Ser Asp Pro Ser Tyr
 35 40 45
 Thr Gly Gln Ile Ile Thr Phe Thr Tyr Pro Leu Ile Gly Asn Tyr Gly
 50 55 60
 Ile Asn Arg Asp Asp Phe Glu Ser Leu Thr Pro Lys Leu Asn Gly Val
 65 70 75 80
 Val Val Lys Glu Ala Ser Thr His Pro Ser Asn Phe Arg His Gln Lys

```
<210> 5570
<211> 563
<212> PRT
<213> S.epidermidis
```

<400> 5570															
Asp	Ser	Glu	Lys	Gly	Leu	Gly	Gly	Gln	Arg	Glu	Met	Ile	Ser	Lys	Ile
1				5				10						15	
Asn	Gly	Lys	Leu	Phe	Ala	Asp	Met	Ile	Ile	Gln	Gly	Ala	Gln	Asn	Leu
			20					25					30		
Ser	Asn	Asn	Ala	Asp	Leu	Val	Asp	Ser	Leu	Asn	Val	Tyr	Pro	Val	Pro
		35					40					45			
Asp	Gly	Asp	Thr	Gly	Thr	Asn	Met	Asn	Leu	Thr	Ile	Thr	Ser	Gly	Arg
	50					55					60				
Glu	Glu	Val	Glu	Asn	Asn	Leu	Ser	Gln	Asn	Ile	Gly	Glu	Leu	Gly	Lys
65				70						75				80	
Thr	Phe	Ser	Lys	Gly	Leu	Leu	Met	Gly	Ala	Arg	Gly	Asn	Ser	Gly	Val
				85					90					95	
Ile	Leu	Ser	Gln	Leu	Phe	Arg	Gly	Phe	Cys	Lys	Asn	Ile	Glu	Glu	Glu
			100					105					110		

Ala Val Glu

<210> 5571
 <211> 52
 <212> PRT
 <213> S.epidermidis

<400> 5571
 Ile Ile Arg Lys Gly Leu Ile Phe Leu Lys Tyr Phe Asn Val Lys Leu
 1 5 10 15
 His Met Asn Thr Lys Tyr Phe Gly Glu Thr Leu Glu Gly Thr Gly Gln
 20 25 30
 Ala Glu Asp Tyr Arg Leu Lys Leu Ser Ser Lys Lys Ala Ser Gln Gln
 35 40 45
 Tyr Glu Val Leu
 50

<210> 5572
 <211> 183
 <212> PRT
 <213> S.epidermidis

<400> 5572
 Val Val Arg Lys Met Asp Ile Gly Tyr Lys Leu Arg Asn Leu Arg Arg
 1 5 10 15
 Ile Lys Asn Leu Thr Gln Glu Glu Leu Ala Glu Arg Thr Asp Leu Ser
 20 25 30
 Lys Gly Tyr Ile Ser Gln Ile Glu Ser Asn His Ala Ser Pro Ser Met
 35 40 45
 Glu Thr Phe Leu Asn Leu Ile Glu Val Leu Gly Thr Ser Ala Ser Asp
 50 55 60
 Phe Phe Lys Glu Pro Ser Asp Glu Lys Val Leu Tyr Lys Lys Lys Glu
 65 70 75 80
 Gln Thr Ile Tyr Asp Glu Tyr Asp Lys Gly Tyr Ile Leu Asn Trp Leu
 85 90 95
 Val Ala Asn Ser Asn Glu Phe Asp Met Glu Pro Leu Ile Leu Thr Leu
 100 105 110
 Arg Pro Asn Ala Ser Tyr Lys Asn Phe Lys Pro Ser Glu Ser Asp Thr
 115 120 125
 Phe Ile Tyr Cys Leu Asn Gly Glu Val Ser Leu Gln Leu Gly Asn Gln
 130 135 140
 Val Tyr Lys Ala Cys Lys Glu Asp Val Leu Tyr Phe Lys Ala Lys Asp
 145 150 155 160
 Lys His Arg Leu Tyr Asn Glu Thr Asp Lys Glu Val Lys Val Leu Ile
 165 170 175
 Val Ala Thr Ala Ser Tyr Leu
 180

<210> 5573
 <211> 178
 <212> PRT
 <213> S.epidermidis

<400> 5573
 Leu Asn Arg Lys Val Glu Lys Arg Leu Ala Trp Ile Ala Asn Ile Leu

His Gly Ile Asp Leu Lys Lys Ala Asn Ala Leu Leu Leu Glu Glu Ala
 210 215 220
 Gly Val Pro Ser Lys Asn Ile Tyr Val Thr Glu Tyr Ala Thr Ser Glu
 225 230 235 240
 Asn Leu Asp Leu Phe Phe Ser Tyr Arg Val Glu Lys Gly Gln Thr Gly
 245 250 255
 Arg Met Leu Ala Phe Ile Gly Arg Lys
 260 265

<210> 5575

<211> 140

<212> PRT

<213> S.epidermidis

<400> 5575

Tyr Asn Leu Lys Ile Lys Glu Phe Asp Leu Phe Met Lys Gln Ser Phe
 1 5 10 15
 Ile Lys Ile Gly Glu Gly Leu Thr Asp Leu Phe Glu Phe Thr Thr Leu
 20 25 30
 Ile Glu Tyr Asn His Lys Arg Ile Asn Arg Ile Val Tyr Phe His Thr
 35 40 45
 Pro His Ser Glu Lys Gln Leu Ser Ser Val Ala Ile Ile Met Asn Pro
 50 55 60
 Thr Ala Glu Lys His Phe Gln Ala Met Tyr Ile Met Thr Asn Ala Leu
 65 70 75 80
 Lys Tyr Pro Tyr Pro Glu Gly Asn Lys Lys Phe Asn Met Ile Asn Ser
 85 90 95
 Ala Ala Glu Asn Tyr Asp Ile Pro Val Val Gly Ile Asp Val Gln Pro
 100 105 110
 Pro Asp Val Tyr Pro Asp Leu Glu Tyr Phe Asn Tyr Leu Ile Ser
 115 120 125
 Val Leu Arg Leu Gln Arg Trp Ile Pro Pro Leu Gln
 130 135 140

<210> 5576

<211> 320

<212> PRT

<213> S.epidermidis

<400> 5576

Met Lys Leu Lys Trp Arg Arg Ile Leu Thr Met Ser Lys Ile Ile Phe
 1 5 10 15
 Met Gly Thr Pro Asp Phe Ser Thr Lys Ile Leu Glu Met Leu Ile Ala
 20 25 30
 Glu His Glu Val Ile Ala Val Val Thr Gln Pro Asp Arg Pro Val Gly
 35 40 45
 Arg Lys Lys Val Met Thr Pro Pro Val Lys Arg Val Ala Thr Lys
 50 55 60
 His Gln Ile Pro Val Tyr Gln Pro Glu Lys Leu Lys Asp Ser Gln Glu
 65 70 75 80
 Leu Glu Ser Leu Leu Ser Leu Glu Ser Asp Leu Ile Val Thr Ala Ala
 85 90 95
 Phe Gly Gln Leu Leu Pro Glu Ser Leu Leu Asn Ala Pro Lys Leu Gly
 100 105 110
 Ala Ile Asn Val His Ala Ser Leu Leu Pro Lys Tyr Arg Gly Gly Ala
 115 120 125

Pro Ile His Gln Ala Ile Ile Asp Gly Glu Glu Glu Thr Gly Ile Thr
 130 135 140
 Ile Met Tyr Met Val Lys Lys Leu Asp Ala Gly Asn Ile Ile Ser Gln
 145 150 155 160
 Gln Ser Ile Arg Ile Glu Glu Glu Asp Asn Val Gly Thr Met His Asp
 165 170 175
 Lys Leu Ser Phe Leu Gly Ala Glu Leu Leu Lys Lys Thr Leu Pro Ser
 180 185 190
 Ile Ile Asp Asn Thr Asn Asp Ser Ile Pro Gln Asp Asp Ala Leu Ala
 195 200 205
 Thr Phe Ala Ser Asn Ile Arg Arg Glu Asp Glu Arg Val Asp Trp Asn
 210 215 220
 Met Ser Ala Gln Ala Ile His Asn His Ile Arg Gly Leu Ser Pro Trp
 225 230 235 240
 Pro Val Ala Tyr Thr Thr Met Asn Glu Lys Asn Leu Lys Leu Phe Ser
 245 250 255
 Ala Phe Ile Val Lys Gly Lys Lys Gly Asn Pro Gly Thr Ile Ile Glu
 260 265 270
 Thr Thr Lys His Glu Leu Ile Ile Ala Thr Gly Ser Asp Asp Ala Ile
 275 280 285
 Ala Leu Thr Glu Ile Gln Pro Ala Gly Lys Lys Arg Met Lys Val Thr
 290 295 300
 Asp Tyr Leu Ser Gly Val Gln Glu Ser Leu Val Gly Lys Val Leu Leu
 305 310 315 320

<210> 5577

<211> 186

<212> PRT

<213> S.epidermidis

<400> 5577

Ser His Met Lys Trp Ser Ile Thr Gln Leu Arg Lys Tyr Gln Gly Lys
 1 5 10 15
 Pro Phe Glu Phe Asn Gln Thr Val Asn Phe Glu His Leu Arg Glu Ser
 20 25 30
 Leu Asp Leu Ile Asp Leu Ser Asp Ile Asn Val Glu Gly Gln Leu Thr
 35 40 45
 Val Lys Ser Asn Glu Val Ile Ala Asp Met His Val Thr Gly Thr Tyr
 50 55 60
 Thr Met Pro Cys Ala Arg Thr Leu Val Pro Val Asp Val Pro Leu Asp
 65 70 75 80
 Val Ser Thr Ser Glu Val Phe Asp Leu Glu Gly Tyr Asp Gly Tyr Thr
 85 90 95
 Asp Ser Asp Asp Gln Glu Asp Glu His Tyr His Leu Val Thr Asp Gly
 100 105 110
 Met Ile Asn Ile Lys Asp Ile Ala Glu Glu Leu Val Ile Ile Glu Lys
 115 120 125
 Pro Met Arg Ala Tyr Ser Glu His Ser Asp Gln Met Leu Thr Glu Gly
 130 135 140
 Asn Gly Trp Glu Val Ile Asp Glu Asp Gln Leu Thr Glu Val Gln Lys
 145 150 155 160
 Glu Gln Asp Ser Asp Ser Glu Gln Arg Lys Ser Asp Pro Arg Leu Gln
 165 170 175
 Lys Leu Gln Gln Leu Asn Asp Lys Asp Asn
 180 185

<210> 5578
 <211> 269
 <212> PRT
 <213> S.epidermidis

<400> 5578

```

Arg Ser Met Asn Lys Pro Ile Gly Val Ile Asp Ser Gly Val Gly Gly
1      5      10      15
Leu Thr Val Ala Lys Glu Ile Met Arg Gln Leu Pro Asn Glu Thr Ile
20      25      30
Tyr Tyr Leu Gly Asp Ile Ala Arg Cys Pro Tyr Gly Pro Arg Pro Gly
35      40      45
Glu Glu Val Lys Lys Phe Thr Glu Leu Ala Gln Lys Leu Met Glu
50      55      60
Phe Asp Ile Lys Met Leu Val Ile Ala Cys Asn Thr Ala Thr Ala Val
65      70      75      80
Ala Leu Asn Tyr Leu Gln Asn Ile Leu Pro Ile Pro Val Ile Gly Val
85      90      95
Ile Glu Pro Gly Ala Arg Thr Ala Ile Met Thr Thr Lys Asn Gln Asn
100     105     110
Val Leu Val Leu Gly Thr Glu Gly Thr Ile Lys Ser Glu Ala Tyr Arg
115     120     125
Thr His Ile Lys Lys Ile Asn Pro Asn Val Asn Val Tyr Ser Val Ala
130     135     140
Cys Pro Gly Phe Val Pro Leu Val Glu Gln Met Arg Tyr Lys Asp Pro
145     150     155     160
Thr Ile Thr Asn Ile Val Ile His Gln Thr Leu Lys Gln Trp Arg Asn
165     170     175
Ser Asp Ala Asp Thr Val Ile Leu Gly Cys Thr His Tyr Pro Leu Leu
180     185     190
Tyr Gln Pro Ile Tyr Glu Tyr Phe Ser Gly Thr Lys Thr Val Ile Ser
195     200     205
Ser Gly Leu Glu Thr Ala Arg Glu Val Ser Ala Leu Leu Thr Phe Ser
210     215     220
Asn Glu His Ala Ser Tyr Thr Glu His Pro Gln His Arg Phe Phe Ala
225     230     235     240
Thr Gly Asp Thr Thr His Ile Lys Asn Ile Ile Asp Glu Trp Leu Asn
245     250     255
Met Lys Val Glu Val Gln Arg Ile Thr Val Asp Asp Ser
260     265

```

<210> 5579
 <211> 210
 <212> PRT
 <213> S.epidermidis

<400> 5579

```

Gln Phe Met Asn Phe Lys Lys Thr Val Ala Ile Val Leu Thr Ser Ala
1      5      10      15
Val Leu Leu Ala Gly Cys Thr Ile Asp Lys Lys Glu Ile Lys Lys Tyr
20      25      30
Asp Asp Gln Val Gln Lys Ala Met Asp Gln Glu Lys Thr Val Asn Gln
35      40      45
Val Ser Lys Lys Ile Asn Glu Leu Glu Glu Lys Lys Gln Lys Leu Phe
50      55      60
Lys Lys Val Asn Asp Lys Asp Gln Ser Thr Arg Lys Lys Ala Ala Glu

```

65					70					75				80	
Asp	Ile	Val	Glu	Asn	Val	Lys	Gln	Arg	Gln	Lys	Glu	Phe	Glu	Lys	Glu
				85					90					95	
Glu	Lys	Ala	Leu	Asp	Asn	Ser	Glu	Lys	Glu	Phe	Lys	Gln	Ala	Lys	Gln
			100					105					110		
Tyr	Leu	Glu	His	Val	Glu	Asn	Lys	Ala	Lys	Lys	Lys	Glu	Val	Glu	Gln
		115					120					125			
Leu	Asp	Ser	Ala	Ile	Lys	Glu	Lys	Tyr	Lys	Ser	His	Asp	Ala	Tyr	Ala
	130					135					140				
Lys	Ala	Tyr	Lys	Lys	Ala	Leu	Asn	Lys	Glu	Lys	Glu	Leu	Phe	Ser	Tyr
145					150					155					160
Leu	Asn	Glu	Asp	Asn	Ala	Thr	Gln	Ser	Glu	Val	Asp	Gly	Lys	Ser	Lys
			165						170					175	
Asp	Leu	Ser	Lys	Ala	Tyr	Lys	Glu	Met	Asn	Asn	Lys	Phe	Asn	Ala	Tyr
			180					185					190		
Ser	Lys	Ala	Ile	Glu	Lys	Val	Lys	Arg	Glu	Lys	Gln	Asp	Val	Asp	Gln
		195					200					205			
Leu	Lys														
	210														

<210> 5580

<211> 427

<212> PRT

<213> S.epidermidis

<400> 5580

Phe	Tyr	Met	Lys	Leu	Ile	Lys	Asn	Gly	Lys	Ile	Leu	Lys	Asn	Gly	Ile
1				5					10					15	
Leu	Lys	Asp	Thr	Glu	Ile	Leu	Ile	Asp	Gly	Lys	Arg	Ile	Lys	Gln	Ile
			20					25					30		
Ser	Ser	Lys	Ile	Asn	Ala	Ser	Ser	Ser	Asn	Ile	Glu	Val	Ile	Asp	Ala
		35					40					45			
Lys	Gly	Asn	Leu	Ile	Ala	Pro	Gly	Phe	Val	Asp	Val	His	Val	His	Leu
	50					55				60					
Arg	Glu	Pro	Gly	Gly	Glu	His	Lys	Glu	Thr	Ile	Glu	Ser	Gly	Thr	Lys
65					70					75					80
Ala	Ala	Ala	Arg	Gly	Gly	Phe	Thr	Thr	Val	Cys	Pro	Met	Pro	Asn	Thr
			85						90					95	
Arg	Pro	Val	Pro	Asp	Thr	Val	Glu	His	Val	Arg	Glu	Leu	Arg	Gln	Arg
			100					105					110		
Ile	Ser	Glu	Thr	Ala	Gln	Val	Arg	Val	Leu	Pro	Tyr	Ala	Ala	Ile	Thr
		115					120					125			
Lys	Arg	Gln	Ala	Gly	Thr	Glu	Leu	Val	Asp	Phe	Glu	Lys	Leu	Ala	Leu
	130					135					140				
Glu	Gly	Val	Phe	Ala	Phe	Thr	Asp	Asp	Gly	Val	Gly	Val	Gln	Thr	Ala
145					150					155					160
Ser	Met	Met	Tyr	Ala	Ala	Met	Lys	Gln	Ala	Ala	Lys	Val	Lys	Lys	Pro
			165						170					175	
Ile	Val	Ala	His	Cys	Glu	Asp	Asn	Ser	Leu	Ile	Tyr	Gly	Gly	Ala	Met
			180					185					190		
His	Lys	Gly	Lys	Arg	Ser	Glu	Glu	Leu	Gly	Ile	Pro	Gly	Ile	Pro	Asn
		195					200					205			
Ile	Ala	Glu	Ser	Val	Gln	Ile	Ala	Arg	Asp	Val	Leu	Leu	Ala	Glu	Ala
	210					215					220				
Thr	Gly	Cys	His	Tyr	His	Val	Cys	His	Val	Ser	Thr	Lys	Glu	Ser	Val
225					230					235					240

Arg Val Ile Arg Asp Ala Lys Lys Ala Gly Ile His Val Thr Ala Glu
 245 250 255
 Val Thr Pro His His Leu Leu Leu Thr Glu Asn Asp Val Pro Gly Asp
 260 265 270
 Asp Ser Asn Tyr Lys Met Asn Pro Pro Leu Arg Ser Asn Glu Asp Arg
 275 280 285
 Glu Ala Leu Leu Glu Gly Leu Leu Asp Gly Thr Ile Asp Cys Ile Ala
 290 295 300
 Thr Asp His Ala Pro His Ala Lys Glu Glu Lys Ala Gln Pro Met Thr
 305 310 315 320
 Lys Ala Pro Phe Gly Ile Val Gly Ser Glu Thr Ala Phe Pro Leu Leu
 325 330 335
 Tyr Thr His Phe Val Arg Arg Gly Asn Trp Ser Leu Gln Gln Leu Val
 340 345 350
 Asp Tyr Phe Thr Ile Lys Pro Ala Thr Ile Phe Asn Leu Asn Tyr Gly
 355 360 365
 Lys Leu His Lys Asp Ser Tyr Ala Asp Leu Thr Ile Ile Asp Leu Asn
 370 375 380
 Thr Glu Lys Glu Ile Lys Ser Glu Asp Phe Leu Ser Lys Ala Asp Asn
 385 390 395 400
 Thr Pro Phe Ile Gly Glu Lys Val Tyr Gly Asn Pro Thr Leu Thr Met
 405 410 415
 Leu Lys Gly Glu Val Val Phe Glu Glu Glu Lys
 420 425

<210> 5581

<211> 133

<212> PRT

<213> S.epidermidis

<400> 5581

Asn Lys Met Lys Ile Phe Leu Lys Lys Ser Leu Glu Ile His Pro Leu
 1 5 10 15
 Asn Leu Lys Lys Val Thr Lys Met Gly Gln Asn Asp Leu Val Lys Thr
 20 25 30
 Leu Arg Met Asn Tyr Leu Phe Asp Phe Tyr Gln Ser Leu Leu Thr Asn
 35 40 45
 Lys Gln Lys Asn Tyr Leu Glu Leu Phe Tyr Leu Gln Asp Tyr Ser Leu
 50 55 60
 Ser Glu Ile Ala Asp Thr Phe Glu Val Ser Arg Gln Ala Val Tyr Asp
 65 70 75 80
 Asn Ile Arg Arg Thr Gly Asp Leu Val Glu Asp Tyr Glu Ser Lys Leu
 85 90 95
 Arg Leu Tyr Gln Arg Phe Glu Lys Arg Arg Glu Leu Tyr Asn Leu Met
 100 105 110
 Lys Gln Ser Leu Asn Gln Pro Glu Leu Leu Lys Gln Tyr Ile Thr Gln
 115 120 125
 Leu Glu Glu Leu Glu
 130

<210> 5582

<211> 158

<212> PRT

<213> S.epidermidis

<400> 5582

Val Arg Met Lys Leu Met Asn Val Pro Ile Leu Pro Thr Ile Ser Thr
 1 5 10 15
 Ser Cys Ile Val Ile Ser Ala Ile Leu Val Ala Ile Gly Trp Ala Leu
 20 25 30
 Ile Trp Lys Arg Gln Val His Lys His Lys Asn Ile Met Leu Trp Ala
 35 40 45
 Ala Phe Phe Ala Leu Thr Phe Phe Ile Ile Tyr Ala Ala Arg Thr Ile
 50 55 60
 Phe Ile Gly Asn Thr Ala Phe Gly Gly Pro Ser Ser Ile Lys Val Tyr
 65 70 75 80
 Tyr Thr Ile Phe Leu Val Phe His Ile Ile Leu Ala Thr Val Gly Gly
 85 90 95
 Val Leu Gly Leu Ile Gln Ile Ile Leu Ala Phe Lys Asp Lys Leu His
 100 105 110
 Ile His Arg Lys Ile Gly Pro Trp Ala Ser Ile Ile Trp Phe Phe Thr
 115 120 125
 Ala Ile Thr Gly Val Ala Val Tyr Val Leu Leu Tyr Val Leu Tyr Pro
 130 135 140
 Gly Gly Glu Thr Thr Ser Leu Leu Lys Ala Thr Leu Gly Leu
 145 150 155

<210> 5583

<211> 223

<212> PRT

<213> S.epidermidis

<400> 5583

Trp Arg Thr Asn Met Asp Lys Glu Tyr Val Val Ile Gly Leu Gly Arg
 1 5 10 15
 Phe Gly Gly Ser Ile Val Arg Glu Leu Asn Ala Leu Asp Met Asp Val
 20 25 30
 Met Ala Ile Asp Arg Asp Glu Asn Arg Val Asn Glu Tyr Ser Asp Ile
 35 40 45
 Ala Thr His Ala Val Val Ala Asp Thr Thr Asp Glu Ala Val Met Lys
 50 55 60
 Ser Leu Gly Ile Arg Asn Phe Asp His Val Ile Val Ala Ile Gly Glu
 65 70 75 80
 Asn Ile Gln Ser Ser Thr Leu Thr Thr Leu Ile Leu Lys Glu Leu Gly
 85 90 95
 Val Lys Lys Val Thr Ala Lys Ala Gln Asn Asp Tyr His Ala Lys Ile
 100 105 110
 Leu Asn Lys Ile Gly Ala Asp Thr Val Val His Pro Glu Arg Asp Met
 115 120 125
 Gly Arg Arg Ile Ala His Asn Val Ala Ser Ala Ser Val Leu Asp Tyr
 130 135 140
 Leu Glu Leu Ala Asp Glu His Ser Ile Val Glu Leu Lys Ser Thr Glu
 145 150 155 160
 Lys Met Ala Gly Gln Thr Ile Ile Glu Leu Asp Ile Arg Ala Gln Tyr
 165 170 175
 Gly Ile Asn Ile Ile Ala Ile Lys Arg Ala Lys Glu Phe Ile Val Ser
 180 185 190
 Pro Asp Pro Asn Ile Asn Ile Glu Ile Gly Asp Ile Leu Ile Met Ile
 195 200 205
 Gly His Asp Asn Asp Leu Gly Arg Phe Glu Lys Asn Ile Ser Lys
 210 215 220

<210> 5584
 <211> 437
 <212> PRT
 <213> S.epidermidis

<400> 5584

Glu	Asp	Lys	Asn	Val	Ala	Phe	Glu	Phe	Arg	Leu	Pro	Asp	Ile	Gly	Glu
1			5					10						15	
Gly	Ile	His	Glu	Gly	Glu	Ile	Val	Lys	Trp	Phe	Ile	Lys	Ala	Gly	Asp
		20						25					30		
Thr	Ile	Glu	Glu	Asp	Asp	Val	Leu	Ala	Glu	Val	Gln	Asn	Asp	Lys	Ser
		35					40					45			
Val	Val	Glu	Ile	Pro	Ser	Pro	Val	Ser	Gly	Thr	Val	Glu	Glu	Val	Leu
	50					55					60				
Val	Asp	Glu	Gly	Thr	Val	Ala	Val	Val	Gly	Asp	Val	Ile	Val	Lys	Ile
65					70					75					80
Asp	Ala	Pro	Asp	Ala	Glu	Glu	Met	Gln	Phe	Lys	Gly	His	Gly	Asp	Asp
				85					90					95	
Glu	Asp	Ser	Lys	Lys	Glu	Glu	Lys	Glu	Gln	Glu	Ser	Pro	Val	Gln	Glu
			100					105					110		
Glu	Ala	Ser	Ser	Thr	Gln	Ser	Gln	Glu	Lys	Thr	Glu	Val	Asp	Glu	Ser
		115					120						125		
Lys	Thr	Val	Lys	Ala	Met	Pro	Ser	Val	Arg	Lys	Tyr	Ala	Arg	Glu	Asn
	130					135					140				
Gly	Val	Asn	Ile	Lys	Ala	Val	Asn	Gly	Ser	Gly	Lys	Asn	Gly	Arg	Ile
145					150					155					160
Thr	Lys	Glu	Asp	Ile	Asp	Ala	Tyr	Leu	Asn	Gly	Gly	Ser	Ser	Glu	Glu
			165					170						175	
Gly	Ser	Asn	Thr	Ser	Ala	Ala	Ser	Glu	Ser	Thr	Ser	Ser	Asp	Val	Val
		180						185					190		
Asn	Ala	Ser	Ala	Thr	Gln	Ala	Leu	Pro	Glu	Gly	Asp	Phe	Pro	Glu	Thr
		195					200					205			
Thr	Glu	Lys	Ile	Pro	Ala	Met	Arg	Lys	Ala	Ile	Ala	Lys	Ala	Met	Val
	210					215					220				
Asn	Ser	Lys	His	Thr	Ala	Pro	His	Val	Thr	Leu	Met	Asp	Glu	Ile	Asp
225					230					235					240
Val	Gln	Glu	Leu	Trp	Asp	His	Arg	Lys	Lys	Phe	Lys	Glu	Ile	Ala	Ala
			245						250					255	
Glu	Gln	Gly	Thr	Lys	Leu	Thr	Phe	Leu	Pro	Tyr	Val	Val	Lys	Ala	Leu
			260					265					270		
Val	Ser	Ala	Leu	Lys	Lys	Tyr	Pro	Ala	Leu	Asn	Thr	Ser	Phe	Asn	Glu
		275					280					285			
Glu	Ala	Gly	Glu	Val	Val	His	Lys	His	Tyr	Trp	Asn	Ile	Gly	Ile	Ala
	290					295					300				
Ala	Asp	Thr	Asp	Lys	Gly	Leu	Leu	Val	Pro	Val	Val	Lys	His	Ala	Asp
305					310					315					320
Arg	Lys	Ser	Ile	Phe	Glu	Ile	Ser	Asp	Glu	Ile	Asn	Glu	Leu	Ala	Val
			325						330					335	
Lys	Ala	Arg	Asp	Gly	Lys	Leu	Thr	Ser	Glu	Glu	Met	Lys	Gly	Ala	Thr
		340						345					350		
Cys	Thr	Ile	Ser	Asn	Ile	Gly	Ser	Ala	Gly	Gly	Gln	Trp	Phe	Thr	Pro
		355					360					365			
Val	Ile	Asn	His	Pro	Glu	Val	Ala	Ile	Leu	Gly	Ile	Gly	Arg	Ile	Ala
	370					375					380				
Gln	Lys	Pro	Ile	Val	Lys	Asp	Gly	Glu	Ile	Val	Ala	Ala	Pro	Val	Leu
385					390					395					400

GenBank "G000000000"

350

<400> 5586

<210> 5587

<211> 173

<212> PRT

<213> S.epidermidis

<400> 5587

Met	Leu	Ile	Asp	Ile	Val	Val	Leu	Leu	Ile	Ile	Cys	Tyr	Phe	Ile	Val
1				5					10					15	
Ile	Gly	Phe	Arg	Arg	Gly	Ile	Trp	Leu	Ser	Ile	Leu	His	Phe	Ala	Ser
			20					25					30		
Ser	Ile	Val	Ser	Leu	Tyr	Ile	Ala	Ser	Gln	His	Tyr	Gln	Ser	Ile	Ala
			35				40					45			
Gln	Arg	Leu	Val	Val	Phe	Val	Pro	Phe	Pro	Lys	Thr	Val	Ala	Phe	Asp
			50			55					60				
Met	Val	Tyr	Thr	Ile	Pro	Tyr	Asp	His	Leu	Gln	Tyr	Arg	Phe	Glu	Lys
65					70					75				80	
Val	Ile	Ala	Phe	Ile	Ile	Ile	Phe	Gly	Met	Cys	Lys	Leu	Ile	Leu	Tyr
				85					90					95	
Leu	Val	Val	Val	Thr	Phe	Asp	Asn	Ile	Ile	Thr	Tyr	Lys	Lys	Ile	His
			100					105					110		
Leu	Val	Ser	Arg	Ile	Ser	Ser	Val	Val	Leu	Ser	Ile	Ile	Ser	Val	Phe
			115				120					125			
Ile	Tyr	Leu	Gln	Ile	Gly	Leu	Tyr	Leu	Leu	Ser	Leu	Tyr	Pro	His	Ser

130		135		140
Phe Ile Gln Tyr Gln	Leu Ser Gln Ser Leu	Val Ser Arg Val Val	Ile	
145	150	155	160	
Glu Gln Ile Pro Tyr	Leu Ser Gln Phe Ile	Leu Asn Leu		
165	170			

<210> 5588

<211> 608

<212> PRT

<213> S.epidermidis

<400> 5588

Phe Ile Ser Glu Ile Lys Ser Arg Ala Leu Asp Leu Asn Ile Gln Gly	1	5	10	15
Ser Asp Ile Ser Met Ala Glu Lys Lys Ile Ile Val Val Gly Gly Gly	20	25	30	
Leu Ala Gly Leu Met Ser Thr Ile Lys Ala Ala Glu Gln Gly Ala His	35	40	45	
Val Asp Leu Phe Ser Ile Val Pro Val Lys Arg Ser His Ser Val Cys	50	55	60	
Ala Gln Gly Gly Ile Asn Gly Ala Val Asn Thr Lys Gly Glu Gly Asp	65	70	75	80
Ser Pro Trp Ile His Phe Asp Asp Thr Val Tyr Gly Gly Asp Phe Leu	85	90	95	
Ala Asn Gln Pro Pro Val Lys Ala Met Ala Asp Ala Ala Pro Lys Ile	100	105	110	
Ile His Leu Leu Asp Arg Met Gly Val Met Phe Asn Arg Thr Lys Glu	115	120	125	
Gly Leu Leu Asp Phe Arg Arg Phe Gly Gly Thr Leu His His Arg Thr	130	135	140	
Ala Phe Ala Gly Ala Thr Gly Gln Gln Leu Leu Tyr Ala Leu Asp	145	150	155	160
Glu Gln Val Arg Ser Phe Glu Val Asp Gly Leu Val Thr Lys Tyr Glu	165	170	175	
Gly Trp Glu Phe Leu Gly Ile Val Lys Asp Glu Glu Asp Ala Ala Arg	180	185	190	
Gly Ile Val Ala Gln Asn Met Thr Thr Ser Glu Ile Gln Ser Phe Gly	195	200	205	
Ser Asp Ala Val Ile Met Ala Thr Gly Gly Pro Gly Ile Ile Phe Gly	210	215	220	
Lys Thr Thr Asn Ser Met Ile Asn Thr Gly Ser Ala Ala Ser Ile Val	225	230	235	240
Tyr Gln Gln Gly Ala Ile Tyr Ala Asn Gly Glu Phe Ile Gln Ile His	245	250	255	
Pro Thr Ala Ile Pro Gly Asp Asp Lys Leu Arg Leu Met Ser Glu Ser	260	265	270	
Ala Arg Gly Glu Gly Gly Arg Ile Trp Thr Tyr Lys Asp Gly Lys Pro	275	280	285	
Trp Tyr Phe Leu Glu Glu Lys Tyr Pro Asp Tyr Gly Asn Leu Val Pro	290	295	300	
Arg Asp Ile Ala Thr Arg Glu Ile Phe Asp Val Cys Ile Asn Gln Lys	305	310	315	320
Leu Gly Ile Asn Gly Glu Asn Met Val Tyr Leu Asp Leu Ser His Lys	325	330	335	
Asp Pro His Glu Leu Asp Val Lys Leu Gly Gly Ile Ile Glu Ile Tyr	340	345	350	

Glu Lys Phe Thr Gly Asp Asp Pro Arg Lys Val Pro Met Lys Ile Phe
 355 360 365
 Pro Ala Val His Tyr Ser Met Gly Gly Leu Tyr Val Asp Tyr Asp Gln
 370 375 380
 Met Thr Asn Ile Lys Gly Leu Phe Ala Ala Gly Glu Cys Asp Phe Ser
 385 390 395 400
 Gln His Gly Gly Asn Arg Leu Gly Ala Asn Ser Leu Leu Ser Ala Ile
 405 410 415
 Tyr Gly Gly Thr Val Ala Gly Pro Asn Ala Ile Lys Tyr Val Glu Asn
 420 425 430
 Val Glu Lys Ser Tyr Thr Asp Leu Asp Asp Ser Ile Phe Glu Ala Arg
 435 440 445
 Val Lys Glu Glu Lys Glu Arg Phe Asp His Leu Leu Asn Met Arg Gly
 450 455 460
 Thr Glu Asn Ala Tyr Lys Leu His Arg Glu Leu Gly Glu Ile Met Thr
 465 470 475 480
 Ala Asn Val Thr Val Val Arg Glu Asn Glu Lys Leu Leu Glu Thr Asp
 485 490 495
 Lys Lys Ile Gln Glu Leu Met Lys Arg Tyr Glu Asp Ile Asp Met Glu
 500 505 510
 Asp Thr Gln Thr Trp Ser Asn Gln Ala Val Phe Phe Thr Arg Gln Leu
 515 520 525
 Trp Asn Met Leu Val Leu Ala Arg Val Ile Thr Ile Gly Ala Tyr Asn
 530 535 540
 Arg Asn Glu Ser Arg Gly Ala His Tyr Lys Pro Glu Phe Pro Glu Arg
 545 550 555 560
 Asn Asp Glu Glu Trp Leu Lys Thr Thr Met Ala Arg Tyr Lys Gly Arg
 565 570 575
 Ser Glu Lys Pro Glu Phe Thr Tyr Glu Pro Val Asp Val Ser Leu Ile
 580 585 590
 Pro Pro Arg Lys Arg Asp Tyr Thr Ser Lys Ser Lys Gly Gly Asn Lys
 595 600 605

<210> 5589

<211> 79

<212> PRT

<213> S.epidermidis

<400> 5589

Cys Met Thr Asp Thr Val Ile Ile Tyr Thr Gln Asp Asp Cys Pro Pro
 1 5 10 15
 Cys Ala Phe Ile Lys Asn Tyr Leu Val Asn Lys Asn Ile Lys Phe Thr
 20 25 30
 Glu Lys Asn Ile Lys Asn Gln Lys Tyr Lys Asn Glu Met Met Asp Tyr
 35 40 45
 Asp Ala Phe Ala Thr Pro Phe Ile Leu Leu Lys Gly Met Pro Met Tyr
 50 55 60
 Gln Val Asp Met Glu Lys Leu Asn Asp Glu Leu Asn Ile Thr Pro
 65 70 75

<210> 5590

<211> 149

<212> PRT

<213> S.epidermidis

<400> 5590

Ile Lys Asp Asp Ser Val Ile Thr Glu Glu Thr Leu Asp Ile Leu Asp
 1 5 10 15
 Asp Ile Glu Asp Ile Ser Asp Met Ile Val Gln Ser Asp Ile Tyr Val
 20 25 30
 Ser Tyr Arg Arg Ala Lys Met Gln Leu Asp Ala Asp Asp Glu Ala Ser
 35 40 45
 Leu Leu Tyr Gln Ala Phe Leu Lys Val Lys Asp Lys Tyr Asp Asp Val
 50 55 60
 Met Arg Phe Gly Lys Tyr His Pro Asp Tyr Lys Asp Ile Met Leu Glu
 65 70 75 80
 Thr Arg Lys Arg Lys Arg Ala Tyr Glu Met Leu Pro Val Val Met Glu
 85 90 95
 Tyr Lys Ala Lys Glu Val Ala Leu Gln Asn Leu Ile Asp Glu Val Met
 100 105 110
 Ser Lys Ile Ala Leu Ala Val Ser Glu His Val Lys Ile Glu Thr Gly
 115 120 125
 Asn Pro Phe Phe Gln Thr Gly His Asp Gly Cys Ala Ser Gly Gly Thr
 130 135 140
 Cys Asn Cys Ser Leu
 145

<210> 5591
 <211> 161
 <212> PRT
 <213> S.epidermidis

<400> 5591
 Lys Lys Cys Asp Asp Met Lys Lys Ala Ile Ile Val Met Phe Val Val
 1 5 10 15
 Thr Val Ile Leu Thr Ile Ala Ala Leu Ile Asp Glu Phe Met Ile Gln
 20 25 30
 Asp Ala Lys His Gly Gln Ser Arg Phe Thr Ser His His Pro Met Lys
 35 40 45
 Ile Asn Thr Tyr Lys Lys Gly Gln Cys Thr Tyr Tyr Val Phe Glu Arg
 50 55 60
 Val Lys Asn Asp Gly Asn Lys Ile Asn Asn Thr Trp Ser Asp Ala Lys
 65 70 75 80
 His Trp Asp Lys Lys Ala Ile Asp Asp Gly Tyr Ile Val Asp Arg Asn
 85 90 95
 Pro Lys Lys Gly Ser Ile Leu Gln Ser Ser Lys Gly Lys Tyr Gly His
 100 105 110
 Val Ala Tyr Ile Glu Thr Ile Asn Glu Asp Gly Ser Met Gln Val Ser
 115 120 125
 Glu Met Asn Tyr Thr Gln Pro Tyr Glu Ile Thr Lys Arg Thr Ile His
 130 135 140
 Thr Tyr Asp Ile Lys Asn Tyr Tyr Tyr Ile His Pro Gln Lys Ile Lys
 145 150 155 160
 Thr

<210> 5592
 <211> 258
 <212> PRT
 <213> S.epidermidis

<400> 5592

Ile Thr Ile Asp Ile Tyr Gln His Phe Arg Lys Glu Glu Gln Asp Ala
 1 5 10 15
 Leu Asp Gln Phe Ile Asp Lys Cys Lys Gln Ala Asp Ala Asn Tyr Ala
 20 25 30
 Pro Val Leu Thr His Phe Leu Asp Pro Arg Gly Gln Tyr Ile Leu Glu
 35 40 45
 Val Ile Thr Arg Ser Tyr Gln Asp Leu His Val Thr Phe Phe Gly Gly
 50 55 60
 Pro His Ala Glu Arg Lys Arg Ala Ile Ile Ala Pro Leu Tyr Phe Lys
 65 70 75 80
 Pro Gln Pro Glu Asp Phe Glu Leu Thr Leu Phe Glu Leu Gln Tyr Pro
 85 90 95
 Lys Lys Phe Val Thr Ile Gln His Gln His Val Leu Gly Thr Leu Met
 100 105 110
 Ser Leu Gly Ile Gln Arg Asp Gln Leu Gly Asp Ile Ile Val Gly Glu
 115 120 125
 Asp Ile Gln Phe Val Leu Thr Lys Gln Leu Glu Ser Tyr Ile Ile Ser
 130 135 140
 Glu Leu Thr Arg Ile Lys Gly Ala Ser Val Lys Leu Asn Ser Ile Pro
 145 150 155 160
 Thr Glu Asp Met Ile Gln Ser Glu Glu Asn Trp Lys Val His Ser Thr
 165 170 175
 Thr Val Ser Ala Leu Arg Leu Asp Val Val Leu Lys Glu Met Ile His
 180 185 190
 Lys Ser Arg Asn Ile Ala Gln Gln Leu Ile Ile Lys Lys Arg Val Lys
 195 200 205
 Val Asn His Thr Val Ile Asp Ser Thr Asp Phe Gln Leu Glu Gln Asn
 210 215 220
 Asp Leu Leu Ser Ile Gln Gly Tyr Gly Arg Ala Gln Ile Val Glu Ile
 225 230 235 240
 Gly Gly Lys Thr Lys Lys Asn Lys Leu His Ile His Tyr Gln Thr Leu
 245 250 255
 Phe Lys

<210> 5593

<211> 50

<212> PRT

<213> S.epidermidis

<400> 5593

Gln Leu Ile Asp Ser Lys Ala Asn Lys Lys Ile Met Lys Asn Tyr Asn
 1 5 10 15
 Trp Glu Tyr Phe Lys Val Gln Ile Ile Lys Lys Phe Ser Glu Pro Lys
 20 25 30
 Thr Lys Ser Ile Tyr Ser Gln Glu Lys Leu Met Trp Ser Leu Phe Leu
 35 40 45
 Asp Leu
 50

<210> 5594

<211> 60

<212> PRT

<213> S.epidermidis

<400> 5594

Ser Asn Tyr Asp Ile Leu Phe Ile His Ile Arg Pro Pro Leu Tyr Lys
 1 5 10 15
 Arg Gly Met Ile Thr Asn Ile Pro Gln Ser Leu Ile Ile Ser Phe Leu
 20 25 30
 Pro His Met Leu Cys Arg Lys Gln Ile Ile Leu Ile Ile Ile Leu Thr
 35 40 45
 Met Glu Leu Ile Lys Val Asn Leu Lys Gln Lys Gln
 50 55 60

<210> 5595
 <211> 41
 <212> PRT
 <213> S.epidermidis

<400> 5595
 Thr Ile Asn Asp Asp Val Phe Tyr Phe Ile Glu Val Phe His Val Ala
 1 5 10 15
 Ser Pro Pro Phe Lys Glu Ser Phe Asp Arg Leu Phe Tyr Phe Pro Ile
 20 25 30
 Leu Leu Ser Lys Ile Gln Val Glu Phe
 35 40

<210> 5596
 <211> 49
 <212> PRT
 <213> S.epidermidis

<400> 5596
 Leu Gln Asn Asp Arg Ile Arg Phe Asp Ser Leu Ser Leu Ser Phe Cys
 1 5 10 15
 Tyr Leu Tyr Tyr Lys Val Asn Leu Thr Gln Phe Val Ala Phe Phe Ile
 20 25 30
 Leu Ser Asn Tyr Glu Phe Leu Thr Val Ala Leu Phe Lys Phe Phe Asn
 35 40 45
 Ser

<210> 5597
 <211> 63
 <212> PRT
 <213> S.epidermidis

<400> 5597
 Leu Gln Gln Asp Ile Asp Asn Met Lys Arg Tyr Thr His Lys Ser Arg
 1 5 10 15
 Val Phe Tyr Tyr Lys Val Asp Arg Lys Val Thr Leu Tyr Thr Lys Tyr
 20 25 30
 Asp Lys Lys Val Gln Val Ser Glu Arg Ile Thr Leu Thr Thr Met Gly
 35 40 45
 Leu Asn Tyr Asn Leu Cys Phe Val Ser Asn Thr Met Ile Glu Leu
 50 55 60

<210> 5598
 <211> 111
 <212> PRT
 <213> S.epidermidis

<400> 5598

Ser His Arg Glu Tyr Gly Ala Thr Leu Arg Ile Arg Ser Ser Thr Met
 1 5 10 15
 Asp Ile Gly Leu Leu Ser Thr Ile Phe Arg Phe Ile Ile Phe Leu Val
 20 25 30
 Gln Ile Tyr Tyr Phe Gly Met Ile Ile Tyr Phe Phe Thr Ser Trp Val
 35 40 45
 Pro Ser Ile Arg Glu Ser Lys Phe Gly Glu Phe Leu Gly Lys Leu Tyr
 50 55 60
 Glu Pro Phe Leu Glu Pro Phe Arg Lys Ile Ile Pro Pro Ile Gly Phe
 65 70 75 80
 Ile Asp Ile Ser Ser Ile Ala Ala Ile Phe Val Leu Val Leu Phe Gln
 85 90 95
 Ser Gly Leu Val Lys Ile Phe Asn Leu Ile Leu Ala Tyr Leu Ser
 100 105 110

<210> 5599

<211> 465

<212> PRT

<213> S.epidermidis

<400> 5599

Met Leu Met Glu Glu Asn Lys Asn Gln Pro Asn Lys Glu Asn Met Ser
 1 5 10 15
 Asn Lys Asp Asp Asn Ala Thr His Leu Asn Asp Ser His Arg Asn Glu
 20 25 30
 Asp Leu Glu Leu Phe Arg Arg Asn Lys Asn Ala Arg Gln Arg Arg Arg
 35 40 45
 Arg Arg Ile Asp Asn Gln Ser Lys Glu Lys Asp Ala Thr Ser Thr Gln
 50 55 60
 Ser Gln Leu Glu Thr Lys Pro Met Asp Lys Phe Ile Asp Asn His Lys
 65 70 75 80
 Ser His Asn Gln Asn Lys Glu Ile Lys Ser Asp Leu Ile Glu Glu Asn
 85 90 95
 Val Asn Asp Glu Asn Asp Asn Gln Lys Asn Ile Asn Asp Lys Leu Asn
 100 105 110
 Asp Arg Ile Val Gln Glu Thr Asn Glu Ser Arg Gln Ser Thr Glu Asp
 115 120 125
 Asp Glu Glu Phe Pro Leu Asp His Arg Ser Glu Gln Gln Pro Lys Ala
 130 135 140
 Ser Arg His Ser Lys Lys His Lys Leu Leu Ser Lys Phe Thr Ser Lys
 145 150 155 160
 Lys Glu Lys Glu Thr Ser Thr Ser Phe Asn Ser Asn Glu Lys Val Thr
 165 170 175
 Gln Ile Lys Pro Leu Ser Leu Glu Glu Lys Arg Ala Ile Arg Arg Lys
 180 185 190
 Lys Gln Lys Arg Ile Gln Tyr Thr Ile Ile Thr Leu Leu Ile Leu Ile
 195 200 205
 Ile Val Leu Ile Leu Leu Tyr Met Val Thr Pro Leu Ser Lys Ile Ser
 210 215 220
 Asn Val Asn Val Lys Gly Asn Asn Asn Val Ser Thr Ser Lys Ile Lys
 225 230 235 240
 Lys Glu Leu Asn Val Thr Ser Arg Ser Arg Met Tyr Thr Phe Ser Lys
 245 250 255
 Asn Lys Ala Ile Arg Asn Leu Lys Gln Asn Pro Leu Ile Lys Glu Val

<400> 5602

Lys Phe Arg Glu Trp Ala Phe Met Ile Gln Ile Lys Gly Ala Val Asn
 1 5 10 15
 Phe Pro Ile Ser Leu Asp Ser Thr Thr Trp Ile Phe Asp Asp Arg Lys
 20 25 30
 Val Thr Ile Asp Asp Leu Glu Arg Gly Val Phe Asp Gly Thr Arg Pro
 35 40 45
 Ile Asn Phe Asp Asp Asn Lys Glu Trp Asn Arg Ala Ile Leu Glu Gly
 50 55 60
 Gln Thr Asn Pro Pro Thr Leu Asp Ser Glu Ile Lys Tyr Lys Lys Arg
 65 70 75 80
 Ser Val Leu Asp Glu Thr Phe Val Ile Asn Met Thr Pro Phe Phe Lys
 85 90 95
 Asn Ala Glu Pro Met Glu Asn Ala Ser Thr Ile Lys Leu Ser Asn Lys
 100 105 110
 Asp Tyr Ser Ile Asn Val Pro Met Asp Leu Leu Pro Tyr Leu Phe Phe
 115 120 125
 Gln Phe Ser Ser Asn Gly Lys Arg Leu Tyr Ser Asp Asn Ala Val Asp
 130 135 140
 Ser Phe Ile Tyr Ile Pro Glu Glu Gly Tyr Ser His Gln Phe Lys Tyr
 145 150 155 160
 Val Thr His Ile Glu Val Ile
 165

<210> 5603

<211> 50

<212> PRT

<213> S.epidermidis

<400> 5603

Tyr Tyr Leu Leu Leu Ile Arg Lys Ser Phe Lys Lys Glu Ser Leu Ala
 1 5 10 15
 Tyr Leu Glu Ile Leu Ser Val Ile Tyr Pro Lys Val Gly Tyr Tyr Asp
 20 25 30
 Lys Ile Thr His Ala His Ala Tyr Gly Gly Pro Ser Cys Cys Tyr Cys
 35 40 45
 Thr Arg
 50

<210> 5604

<211> 50

<212> PRT

<213> S.epidermidis

<400> 5604

Phe Thr Ile Leu Ile Glu Thr Ser Ile Leu Ile Phe Ile Asn Asp Met
 1 5 10 15
 Ser Arg Tyr Val Asn Asp Lys Ile Glu Thr Ile Ile Asp Thr Glu Phe
 20 25 30
 Asn Glu Ile Glu Tyr His Cys Asp Ala Ile Tyr Tyr Ile Ile Val Lys
 35 40 45
 Tyr Cys
 50

<210> 5605

<211> 121
 <212> PRT
 <213> S.epidermidis

<400> 5605

Leu	Gly	Val	Leu	Thr	Met	Asn	Lys	Phe	Ile	Lys	Tyr	Phe	Leu	Ile	Leu
1				5					10					15	
Leu	Ser	Phe	Gly	Leu	Leu	Val	Val	Pro	Ile	Ile	Phe	Ala	Thr	Gln	Leu
			20					25					30		
Tyr	Gln	Ser	Ser	Glu	Ser	Ala	Phe	Glu	Ser	Ser	Gln	Asn	Thr	Lys	Asp
		35					40					45			
Ser	Gln	Arg	Lys	Ser	Thr	Leu	Arg	Asp	Ser	Lys	Val	Asp	Pro	Glu	Lys
		50				55					60				
Gln	Pro	Ile	Ser	Ile	Leu	Phe	Leu	Gly	Ile	Asp	Asp	Asn	Glu	Gly	Arg
65					70				75					80	
Glu	Lys	Asn	Gly	Gln	Ser	Val	Glu	His	Ser	Arg	Ser	Asp	Ala	Met	Ile
				85				90						95	
Leu	Ser	Thr	Phe	Asn	Gln	Lys	Lys	Leu	Gln	Lys	Arg	Lys	Leu	Ser	Ile
			100					105					110		
Pro	Arg	Asp	Thr	Ile	Ser	Tyr	Ile	Pro							
		115					120								

<210> 5606
 <211> 48
 <212> PRT
 <213> S.epidermidis

<400> 5606

Tyr	Thr	Pro	Leu	Ile	Ser	Leu	Thr	Ile	Arg	Pro	Val	Phe	Lys	Lys	Thr
1				5					10					15	
Pro	Leu	Ile	Tyr	Ile	Phe	Leu	Ile	Ile	Leu	Tyr	Gln	Asn	Thr	Ser	Thr
			20					25					30		
Tyr	Asn	Ile	Thr	Thr	Gln	Phe	Lys	Leu	Asn	Asp	Leu	Pro	Thr	Asn	Ile
		35					40					45			

<210> 5607
 <211> 172
 <212> PRT
 <213> S.epidermidis

<400> 5607

Gln	Ile	Leu	Cys	Tyr	Leu	Lys	Lys	Glu	Asn	Asn	Met	Ser	Lys	Thr	Arg
1				5					10					15	
Ala	Val	Ile	Pro	Gly	Ser	Phe	Asp	Pro	Ile	Thr	Tyr	Gly	His	Leu	Asp
			20					25					30		
Ile	Ile	Glu	Arg	Ser	Ala	Asp	Arg	Phe	Asp	Glu	Ile	His	Val	Cys	Val
		35					40					45			
Leu	Lys	Asn	Ser	Ser	Lys	Gly	Gly	Thr	Phe	Asp	Ser	Glu	Glu	Arg	Met
		50				55					60				
Thr	Leu	Ile	Glu	Glu	Ser	Val	Lys	His	Leu	Pro	Asn	Ile	Gln	Val	His
65					70				75					80	
His	Phe	Asn	Gly	Leu	Leu	Val	Asp	Phe	Cys	Asp	Gln	Val	Gly	Ala	Lys
			85					90						95	
Thr	Ile	Ile	Arg	Gly	Leu	Arg	Ala	Val	Ser	Asp	Phe	Glu	Tyr	Glu	Leu
			100					105					110		
Arg	Leu	Thr	Ser	Met	Asn	Lys	Lys	Leu	Asn	Ser	Asn	Ile	Glu	Thr	Met

	115						120					125							
Tyr	Met	Met	Thr	Ser	Ala	Asn	Tyr	Ser	Phe	Ile	Ser	Ser	Ser	Ile	Val				
	130						135					140							
Lys	Glu	Val	Ala	Ala	Tyr	Gln	Ala	Asp	Ile	Ser	Pro	Phe	Val	Pro	Pro				
145					150					155					160				
His	Val	Glu	Arg	Ala	Leu	Lys	Lys	Lys	Phe	Asn	Val								
				165					170										

<210> 5608

<211> 68

<212> PRT

<213> S.epidermidis

<400> 5608

Arg	Gln	Leu	Trp	Leu	Ser	Lys	Ser	Ile	Ser	Leu	Val	Lys	Arg	Glu	Arg				
1				5					10					15					
Asn	Arg	Ile	His	Asn	Glu	Phe	Ile	Ile	Pro	Pro	Ser	Arg	Asn	Met	Thr				
			20				25					30							
Leu	Asn	Arg	Glu	Ser	Asn	Lys	Ile	Phe	Ile	Thr	Glu	Thr	Gln	Thr	Leu				
			35				40					45							
Lys	Arg	Phe	Ile	Leu	Ser	Thr	Phe	Gln	Gly	Ser	Gln	Ser	Thr	Ala	Lys				
	50					55					60								
Arg	Phe	Asn	Gly																
65																			

<210> 5609

<211> 1154

<212> PRT

<213> S.epidermidis

<400> 5609

Gly	Val	Ser	Trp	Leu	Leu	Lys	Gln	Ile	Lys	Lys	Leu	Leu	Val	Ala	Asn				
1				5					10					15					
Arg	Gly	Glu	Ile	Ala	Ile	Arg	Ile	Phe	Arg	Ala	Ala	Ala	Glu	Leu	Asn				
			20				25					30							
Ile	Ser	Thr	Val	Ala	Ile	Tyr	Ser	Asn	Glu	Asp	Lys	Ser	Ser	Leu	His				
			35				40					45							
Arg	Tyr	Lys	Ala	Asp	Glu	Ser	Tyr	Leu	Val	Gly	Ser	Asp	Leu	Gly	Pro				
	50					55					60								
Ala	Glu	Ser	Tyr	Leu	Asn	Ile	Glu	Arg	Ile	Ile	Glu	Val	Ala	Leu	Arg				
65					70				75					80					
Ala	Gly	Val	Asp	Ala	Ile	His	Pro	Gly	Tyr	Gly	Phe	Leu	Ser	Glu	Asn				
			85						90					95					
Glu	Gln	Phe	Ala	Arg	Arg	Cys	Ala	Glu	Glu	Gly	Ile	Lys	Phe	Ile	Gly				
			100					105					110						
Pro	His	Leu	Glu	His	Leu	Asp	Met	Phe	Gly	Asp	Lys	Val	Lys	Ala	Arg				
		115					120					125							
Thr	Thr	Ala	Ile	Asn	Ala	Asn	Leu	Pro	Val	Ile	Pro	Gly	Thr	Asp	Gly				
	130					135						140							
Pro	Ile	Glu	Ser	Phe	Glu	Ala	Ala	Glu	Gln	Phe	Ala	Asn	Glu	Ala	Gly				
145					150					155					160				
Tyr	Pro	Leu	Met	Ile	Lys	Ala	Thr	Ser	Gly	Gly	Gly	Gly	Lys	Gly	Met				
				165					170					175					
Arg	Ile	Val	Arg	Glu	Ser	Ser	Glu	Leu	Glu	Asp	Ala	Phe	His	Arg	Ala				
			180					185					190						
Lys	Ser	Glu	Ala	Glu	Lys	Ser	Phe	Gly	Asn	Ser	Glu	Val	Tyr	Ile	Glu				

```

195          200          205
Arg Tyr Ile Asp Asn Pro Lys His Ile Glu Val Gln Val Ile Gly Asp
210          215          220
Glu Phe Gly Asn Ile Ile His Leu Tyr Glu Arg Asp Cys Ser Val Gln
225          230          235          240
Arg Arg His Gln Lys Val Val Glu Val Ala Pro Ser Val Gly Leu Ser
245          250          255
Asn Lys Leu Arg Glu Arg Ile Cys Asp Ala Ala Ile Gln Leu Met Glu
260          265          270
Asn Ile Lys Tyr Val Asn Ala Gly Thr Val Glu Phe Leu Val Ser Gly
275          280          285
Asp Glu Phe Phe Phe Ile Glu Val Asn Pro Arg Val Gln Val Glu His
290          295          300
Thr Ile Thr Glu Met Ile Thr Gly Ile Asp Ile Val Lys Thr Gln Ile
305          310          315          320
Leu Val Ala Asn Gly Glu Ser Leu Phe Gly Asp Lys Ile Ser Met Pro
325          330          335
Gln Gln Asn Glu Ile Gln Thr Leu Gly Tyr Ala Ile Gln Cys Arg Ile
340          345          350
Thr Thr Glu Asp Pro Thr Asn Asp Phe Met Pro Asp Ser Gly Thr Ile
355          360          365
Ile Ala Tyr Arg Ser Ser Gly Gly Phe Gly Val Arg Leu Asp Ala Gly
370          375          380
Asp Gly Phe Gln Gly Ala Glu Ile Ser Pro Tyr Tyr Asp Ser Leu Leu
385          390          395          400
Val Lys Leu Ser Thr His Ala Val Ser Phe Lys Gln Ala Glu Glu Lys
405          410          415
Met Glu Arg Ser Leu Arg Glu Met Arg Ile Arg Gly Val Lys Thr Asn
420          425          430
Ile Pro Phe Leu Ile Asn Val Met Arg Asn Asp Lys Phe Arg Ser Gly
435          440          445
Asp Tyr Thr Thr Lys Phe Ile Glu Glu Thr Pro Glu Leu Phe Asp Ile
450          455          460
Ala Pro Thr Leu Asp Arg Gly Thr Lys Thr Leu Glu Tyr Ile Gly Asn
465          470          475          480
Val Thr Ile Asn Gly Phe Pro Asn Val Glu Lys Arg Pro Lys Pro Glu
485          490          495
Tyr Glu Ser Thr Lys Ile Pro Lys Ile Ser Gln Lys Lys Ile Asn Gln
500          505          510
Leu Phe Gly Thr Lys Gln Ile Leu Glu Gln His Gly Pro Thr Gly Val
515          520          525
Thr Asn Trp Val Arg Glu Gln Glu Asp Val Leu Ile Thr Asp Thr Thr
530          535          540
Phe Arg Asp Ala His Gln Ser Leu Leu Ala Thr Arg Val Arg Thr Lys
545          550          555          560
Asp Met Met Asn Ile Ala Ser Lys Thr Ala Glu Val Phe Lys Asp Ser
565          570          575
Phe Ser Leu Glu Met Trp Gly Gly Ala Thr Phe Asp Val Ala Tyr Asn
580          585          590
Phe Leu Lys Glu Asn Pro Trp Glu Arg Leu Glu Arg Leu Arg Lys Ala
595          600          605
Ile Pro Asn Val Leu Phe Gln Met Leu Leu Arg Ala Ser Asn Ala Val
610          615          620
Gly Tyr Lys Asn Tyr Pro Asp Asn Val Ile Lys Lys Phe Val His Glu
625          630          635          640
Ser Ala Lys Ala Gly Val Asp Val Phe Arg Ile Phe Asp Ser Leu Asn

```

			645				650				655				
Trp	Val	Asp	Gln	Met	Lys	Val	Ala	Asn	Glu	Ala	Val	Gln	Glu	Ala	Gly
			660				665						670		
Met	Val	Ser	Glu	Gly	Thr	Ile	Cys	Tyr	Thr	Gly	Asp	Ile	Leu	Asn	Ala
			675				680						685		
Glu	Arg	Ser	Asn	Ile	Tyr	Thr	Leu	Asp	Tyr	Tyr	Val	Lys	Met	Ala	Lys
			690				695						700		
Glu	Leu	Glu	Arg	Glu	Gly	Phe	His	Ile	Leu	Ala	Ile	Lys	Asp	Met	Ala
705				710						715			720		
Gly	Leu	Leu	Lys	Pro	Lys	Ala	Ala	Tyr	Glu	Leu	Ile	Gly	Glu	Leu	Arg
			725				730						735		
Glu	Ala	Thr	His	Leu	Pro	Ile	His	Leu	His	Thr	His	Asp	Thr	Ser	Gly
			740				745						750		
Asn	Gly	Leu	Leu	Thr	Tyr	Lys	Gln	Ala	Ile	Asp	Ala	Gly	Val	Asp	Ile
			755				760						765		
Ile	Asp	Thr	Ala	Val	Ala	Ser	Met	Ser	Gly	Leu	Thr	Ser	Gln	Pro	Ser
			770				775						780		
Ala	Asn	Ser	Leu	Tyr	Tyr	Ala	Leu	Asn	Gly	Phe	Pro	Arg	Asn	Leu	Arg
785				790						795			800		
Thr	Asp	Ile	Asp	Gly	Leu	Glu	Glu	Leu	Ser	His	Tyr	Trp	Ser	Val	Val
			805				810						815		
Arg	Pro	Tyr	Tyr	Ala	Asp	Phe	Glu	Ser	Asp	Ile	Lys	Ser	Pro	Asn	Thr
			820				825						830		
Glu	Ile	Tyr	Gln	His	Glu	Met	Pro	Gly	Gly	Gln	Tyr	Ser	Asn	Leu	Ser
			835				840						845		
Gln	Gln	Ala	Lys	Ser	Leu	Gly	Leu	Gly	Glu	Arg	Phe	Asp	Glu	Val	Lys
			850				855						860		
Glu	Met	Tyr	Arg	Arg	Val	Asn	Phe	Leu	Phe	Gly	Asp	Leu	Val	Lys	Val
865				870						875			880		
Thr	Pro	Ser	Ser	Lys	Val	Val	Gly	Asp	Met	Ala	Leu	Tyr	Met	Val	Gln
			885				890						895		
Asn	Asp	Leu	Asp	Glu	Asp	Thr	Val	Ile	Asn	Asp	Gly	Tyr	Lys	Leu	Asp
			900				905						910		
Phe	Pro	Glu	Ser	Val	Val	Ser	Phe	Phe	Lys	Gly	Asp	Ile	Gly	Gln	Pro
			915				920						925		
Val	Asn	Gly	Phe	Asn	Lys	Lys	Leu	Gln	Asp	Val	Ile	Leu	Lys	Gly	Gln
			930				935						940		
Gln	Pro	Ile	Thr	Glu	Arg	Pro	Gly	Glu	Tyr	Leu	Glu	Pro	Val	Asp	Phe
945				950						955			960		
Glu	Ala	Ile	Arg	Gln	Glu	Leu	Ser	Asp	Ile	Gln	Gln	Asp	Glu	Val	Thr
			965				970						975		
Glu	Gln	Asp	Ile	Ile	Ser	Tyr	Val	Leu	Tyr	Pro	Lys	Val	Tyr	Lys	Gln
			980				985						990		
Tyr	Ile	Gln	Thr	Lys	Glu	Gln	Phe	Gly	Asn	Val	Ser	Leu	Leu	Asp	Thr
			995				1000						1005		
Pro	Thr	Phe	Leu	Phe	Gly	Met	Arg	Asn	Gly	Glu	Thr	Val	Glu	Ile	Glu
			1010				1015						1020		
Ile	Asp	Thr	Gly	Lys	Arg	Leu	Ile	Ile	Lys	Leu	Glu	Thr	Ile	Ser	Glu
1025				1030						1035			1040		
Pro	Asp	Glu	Asn	Gly	Lys	Arg	Thr	Ile	Tyr	Tyr	Ala	Met	Asn	Gly	Gln
			1045				1050						1055		
Ala	Arg	Arg	Ile</												

1090 1095 1100
 Gln Ala Asn Gln Pro Leu Leu Ile Thr Glu Ala Met Lys Met Glu Thr
 1105 1110 1115 1120
 Thr Ile Gln Ala Pro Phe Asp Gly Ile Ile Lys Gln Ile Asn Val Ala
 1125 1130 1135
 Asn Gly Asp Ala Ile Ala Thr Gly Asp Leu Leu Val Glu Ile Glu Lys
 1140 1145 1150
 Gln Ser

<210> 5610
 <211> 42
 <212> PRT
 <213> S.epidermidis

<400> 5610
 Ala Asn Thr Cys Arg Ile Tyr His Tyr Lys Cys Trp Leu Ser Leu Val
 1 5 10 15
 Asp Ile Tyr Tyr Cys Tyr Asp Ile Met Asp Ser Ile Leu Arg Cys Arg
 20 25 30
 Ala Pro Gln Asp Phe Trp Phe Leu His Leu
 35 40

<210> 5611
 <211> 77
 <212> PRT
 <213> S.epidermidis

<400> 5611
 Leu Ala Asn Cys Phe Trp Phe Arg Phe Arg Lys Phe Leu Lys Val Ile
 1 5 10 15
 Phe Leu Tyr Ser Asn Gln Lys Ile Gln Ile Met Cys Arg His Ile Glu
 20 25 30
 Leu Leu Leu Thr Ile Phe Tyr Asp Asp Ile Ile Asp Cys Ile Thr Met
 35 40 45
 Ile Phe Asn Phe Ile Lys Phe Ser Ile Tyr Asn Cys Phe Asn Phe Ile
 50 55 60
 Ile His Ile Ser Arg His Ile Ile Tyr Glu Asp Glu Tyr
 65 70 75

<210> 5612
 <211> 450
 <212> PRT
 <213> S.epidermidis

<400> 5612
 Leu Phe Lys Trp Cys Thr Arg Val Val Ser Trp Glu Ser Ser Ile Met
 1 5 10 15
 Met Lys Ser Val Arg Thr Tyr Ala Leu Glu Thr Ile Asn Asp Val Leu
 20 25 30
 Asn Lys Gly Ala Tyr Ser Asn Leu Lys Ile Asn Glu Val Leu Ser Thr
 35 40 45
 Asn Asn Ile Asn Thr Val Asp Lys Asn Leu Phe Thr Glu Leu Val Tyr
 50 55 60
 Gly Thr Ile Lys Arg Lys Tyr Thr Leu Asp Tyr Leu Leu Lys Pro Phe
 65 70 75 80


```

1           5           10           15
Gly Ala Thr Ile Gly Ile Ile Gly Gly Gly Gln Leu Gly Lys Met Met
                20           25           30
Ala Gln Ser Ala Gln Lys Met Gly Tyr Lys Val Ile Val Leu Asp Pro
                35           40           45
Asn Glu Asp Cys Pro Cys Arg Tyr Val Ala His Gln Phe Ile His Ala
                50           55           60
Asn Tyr Asp Asp Glu Gln Ala Leu Asn Gln Leu Gly Glu Asn Ser Asp
65           70           75           80
Val Val Thr Tyr Glu Phe Glu Asn Ile Ser Ser Glu Gln Leu Lys Lys
                85           90           95
Leu Thr Gln Leu Tyr His Ile Pro Gln Gly Tyr Gln Ala Ile Glu Leu
                100          105          110
Leu Gln Asp Arg Leu Thr Glu Lys Gln Thr Leu Leu Glu Ala Asn Thr
                115          120          125
Gln Ile Val Pro Phe Val Gln Ile His Thr Asn Gln Asp Leu Leu Lys
                130          135          140
Ala Ile Glu Lys Leu Gly Phe Pro Cys Ile Val Lys Thr Arg Phe Gly
145          150          155          160
Gly Tyr Asp Gly Lys Gly Gln Ile Leu Val Arg Asn Asp Ser Glu Leu
                165          170          175
Asp Glu Ala Tyr Gln Leu Val Glu Lys Gln Glu Cys Val Ala Glu Gln
                180          185          190
Tyr Leu Asp Ile Gln Lys Glu Val Ser Leu Thr Val Thr Ile Gly Asn
                195          200          205
Glu Gln Gln Thr Thr Tyr Phe Pro Leu Gln Glu Asn Glu His Gln Asn
                210          215          220
Gln Ile Leu Phe Lys Thr Val Val Pro Ala Arg Ser Asp Lys Glu Asn
225          230          235          240
Glu Ala Arg Lys Glu Val Glu Lys Ile Thr Arg Ala Ile His Phe Val
                245          250          255
Gly Thr Phe Thr Val Glu Phe Phe Ile Asp Lys Glu Asn Asn Leu Tyr
                260          265          270
Val Asn Glu Ile Ala Pro Arg Pro His Asn Ser Gly His Tyr Ser Ile
                275          280          285
Glu Ala Cys Asp Tyr Ser Gln Phe Asp Thr His Ile Leu Ala Ile Thr
                290          295          300
Gly Gln Lys Leu Pro Gln Ala Ile Glu Leu Leu Lys Pro Thr Val Met
305          310          315          320
Met Asn Leu Leu Gly Arg Asp Leu Asp Leu Leu Glu Asn Glu Phe Ser
                325          330          335
Arg His Pro Asp Trp His Ile His Ile Tyr Gly Lys Lys Glu Arg Lys
                340          345          350
Pro Asp Arg Lys Met Gly His Met Thr Leu Leu Thr Asp Asp Val Asn
                355          360          365
Gln Thr Glu Gln Tyr Met Leu Met Lys Phe Glu Gly Arg Asp Lys
                370          375          380

```

<210> 5614

<211> 668

<212> PRT

<213> S.epidermidis

<400> 5614

```

Ser Trp Arg Trp Thr Leu Met Asn Phe Pro Trp Asp Gln Leu Leu Val
1           5           10           15

```

Lys Gly Asn Trp Met Ile Ile Ser Ala Gln Ile Ala Ala Pro Phe Leu
 20 25 30
 Val Ile Gly Leu Ile Ala Val Ile Ser Tyr Phe Lys Leu Trp Lys Tyr
 35 40 45
 Leu Tyr Lys Glu Trp Phe Thr Ser Val Asp His Lys Lys Ile Gly Ile
 50 55 60
 Met Tyr Leu Ile Ser Ala Val Leu Met Phe Val Arg Gly Gly Ile Asp
 65 70 75 80
 Ala Leu Met Leu Arg Thr Gln Leu Thr Ile Pro Asp Asn Lys Phe Leu
 85 90 95
 Glu Ala Asn His Tyr Asn Glu Val Phe Thr Thr His Gly Val Ile Met
 100 105 110
 Ile Ile Phe Met Ala Met Pro Phe Ile Phe Gly Leu Trp Asn Val Val
 115 120 125
 Ile Pro Leu Gln Leu Gly Ala Arg Asp Val Ala Phe Pro Val Met Asn
 130 135 140
 Asn Val Ser Phe Trp Leu Phe Phe Ala Gly Met Ile Leu Phe Asn Leu
 145 150 155 160
 Ser Phe Ile Val Gly Gly Ser Pro Ala Ala Gly Trp Thr Asn Tyr Ala
 165 170 175
 Pro Leu Ala Gly Glu Phe Ser Pro Gly Pro Gly Val Asn Tyr Tyr Leu
 180 185 190
 Ile Ala Ile Gln Ile Ser Gly Ile Gly Ser Leu Met Thr Gly Ile Asn
 195 200 205
 Phe Phe Val Thr Ile Leu Arg Cys Lys Thr Pro Thr Met Lys Phe Met
 210 215 220
 Gln Met Pro Met Phe Ser Val Thr Thr Phe Ile Thr Thr Leu Ile Val
 225 230 235 240
 Ile Leu Ala Phe Pro Val Phe Thr Val Ala Leu Ala Leu Met Thr Ala
 245 250 255
 Asp Arg Ile Phe Gly Thr Gln Phe Phe Thr Val Ala Asn Gly Gly Met
 260 265 270
 Pro Met Leu Trp Ala Asn Phe Phe Trp Val Trp Gly His Pro Glu Val
 275 280 285
 Tyr Ile Val Ile Leu Pro Ala Phe Gly Met Tyr Ser Glu Ile Ile Pro
 290 295 300
 Thr Phe Ala Arg Lys Arg Leu Phe Gly His Gln Ser Met Ile Trp Ala
 305 310 315 320
 Thr Ala Gly Ile Ala Phe Leu Ser Phe Leu Val Trp Val His His Phe
 325 330 335
 Phe Thr Met Gly Asn Gly Ala Leu Ile Asn Ser Phe Phe Ser Ile Ser
 340 345 350
 Thr Met Leu Ile Gly Val Pro Thr Gly Val Lys Leu Phe Asn Trp Leu
 355 360 365
 Leu Thr Leu Tyr Lys Gly Arg Ile Thr Phe Glu Ser Pro Met Leu Phe
 370 375 380
 Ser Leu Ala Phe Ile Pro Asn Phe Leu Leu Gly Gly Val Thr Gly Val
 385 390 395 400
 Met Leu Ala Met Ala Ser Ala Asp Tyr Gln Tyr His Asn Thr Tyr Phe
 405 410 415
 Leu Val Ala His Phe His Tyr Thr Leu Val Thr Gly Val Val Phe Ala
 420 425 430
 Cys Leu Ala Gly Leu Ile Phe Trp Tyr Pro Lys Met Met Gly Tyr Lys
 435 440 445
 Leu Asn Glu Thr Leu Asn Lys Trp Cys Phe Trp Phe Phe Met Ile Gly
 450 455 460

Phe Asn Val Cys Phe Leu Pro Gln Phe Ile Leu Gly Leu Asp Gly Met
 465 470 475 480
 Pro Arg Arg Leu Tyr Thr Tyr Met Pro Ser Asp Gly Trp Trp Leu Leu
 485 490 495
 Asn Phe Ile Ser Thr Ile Gly Ala Val Leu Met Ala Ile Gly Phe Leu
 500 505 510
 Phe Leu Val Ala Ser Ile Val Tyr Ser His Ile Lys Ala Pro Arg Glu
 515 520 525
 Ala Thr Gly Asp Asn Trp Asp Gly Leu Gly Arg Thr Leu Glu Trp Ser
 530 535 540
 Thr Ala Ser Ala Ile Pro Pro Lys Tyr Asn Phe Ala Ile Thr Pro Asp
 545 550 555 560
 Trp Asn Asp Tyr Asp Thr Phe Val Asp Met Lys Glu His Gly Arg His
 565 570 575
 Tyr Leu Asp Asn His Asn Tyr Lys Asp Ile His Met Pro Asn Asn Thr
 580 585 590
 Pro Val Gly Phe Trp Met Gly Ile Phe Met Thr Ile Gly Gly Phe Phe
 595 600 605
 Leu Ile Phe Glu Ser Ile Val Pro Ala Leu Ile Cys Leu Ala Gly Ile
 610 615 620
 Phe Ile Thr Met Ile Trp Arg Ser Phe Gln Ile Asp His Gly Tyr His
 625 630 635 640
 Ile Pro Ala Ser Glu Val Ala Glu Thr Glu Ala Arg Leu Arg Glu Ala
 645 650 655
 Arg Ile Lys Glu Arg Glu Ala Val Ser His Glu Ser
 660 665

<210> 5615

<211> 56

<212> PRT

<213> S.epidermidis

<400> 5615

Lys Leu Leu Arg Ile Glu Ile Arg Ile Lys Ala Ile Asp Pro Gly Thr
 1 5 10 15
 Asn Lys Thr Val Pro Lys Tyr Leu Ala Glu Ser Gly Lys Lys Pro Ile
 20 25 30
 Asn Pro Thr Lys Lys Lys Thr Lys Lys Thr Phe Val Thr Ser Gln Thr
 35 40 45
 Gly Leu Arg Tyr Leu Trp Ile Lys
 50 55

<210> 5616

<211> 566

<212> PRT

<213> S.epidermidis

<400> 5616

Cys Gly Glu Arg Arg Ile Met Lys Gln Leu His Ser Asn Glu Val Gly
 1 5 10 15
 Val Tyr Ala Leu Gly Gly Leu Gly Glu Val Gly Lys Asn Thr Tyr Ala
 20 25 30
 Val Glu Tyr Lys Asp Glu Ile Val Ile Ile Asp Ala Gly Ile Lys Phe
 35 40 45
 Pro Asp Asp Asn Leu Leu Gly Ile Asp Tyr Val Ile Pro Asp Tyr Thr
 50 55 60

Tyr	Leu	Glu	Gln	Asn	Gln	Asp	Lys	Ile	Val	Gly	Leu	Phe	Ile	Thr	His
65					70					75					80
Gly	His	Glu	Asp	His	Ile	Gly	Gly	Val	Pro	Phe	Leu	Leu	Lys	Gln	Ile
				85					90					95	
Asn	Val	Pro	Ile	Tyr	Gly	Gly	Pro	Leu	Ala	Leu	Gly	Leu	Ile	Arg	Asn
			100					105					110		
Lys	Leu	Glu	Glu	His	His	Leu	Leu	Arg	Thr	Thr	Glu	Leu	His	Glu	Ile
		115						120				125			
Asp	Glu	Ser	Ser	Val	Ile	Lys	Ser	Lys	His	Phe	Glu	Ile	Ser	Phe	Tyr
	130					135					140				
Leu	Thr	Thr	His	Ser	Ile	Pro	Glu	Ala	Tyr	Gly	Val	Ile	Val	Asp	Thr
145					150					155					160
Pro	Glu	Gly	Lys	Ile	Val	His	Thr	Gly	Asp	Phe	Lys	Phe	Asp	Phe	Thr
				165					170					175	
Pro	Val	Gly	Glu	Pro	Ala	Asn	Ile	Ala	Lys	Met	Ala	Gln	Leu	Gly	His
			180					185					190		
Glu	Gly	Val	Leu	Cys	Leu	Leu	Ser	Asp	Ser	Thr	Asn	Ala	Leu	Val	Pro
		195					200					205			
Asp	Phe	Thr	Leu	Ser	Glu	Arg	Glu	Val	Gly	Gln	Asn	Val	Asp	Lys	Ile
	210					215					220				
Phe	Arg	Asn	Cys	Lys	Gly	Arg	Ile	Ile	Phe	Ala	Thr	Phe	Ala	Ser	Asn
225					230					235					240
Ile	Tyr	Arg	Val	Gln	Gln	Ala	Val	Glu	Ala	Ala	Ile	Lys	Tyr	Asn	Arg
				245					250					255	
Lys	Ile	Val	Thr	Phe	Gly	Arg	Ser	Met	Glu	Asn	Asn	Ile	Lys	Ile	Gly
			260					265					270		
Met	Glu	Leu	Gly	Tyr	Ile	Lys	Ala	Pro	Pro	Glu	Thr	Phe	Ile	Glu	Pro
		275					280					285			
Asn	Lys	Ile	Asn	Ser	Val	Pro	Lys	His	Glu	Leu	Leu	Ile	Leu	Cys	Thr
	290					295					300				
Gly	Ser	Gln	Gly	Glu	Pro	Met	Ala	Ala	Leu	Ser	Arg	Ile	Ala	Asn	Gly
305					310					315					320
Thr	His	Lys	Gln	Ile	Lys	Ile	Ile	Pro	Glu	Asp	Thr	Val	Val	Phe	Ser
				325						330				335	
Ser	Ser	Pro	Ile	Pro	Gly	Asn	Thr	Lys	Ser	Ile	Asn	Arg	Thr	Ile	Asn
			340					345					350		
Ala	Leu	Tyr	Lys	Ala	Gly	Ala	Asp	Val	Ile	His	Ser	Lys	Ile	Ser	Asn
		355					360					365			
Ile	His	Thr	Ser	Gly	His	Gly	Ser	Gln	Gly	Asp	Gln	Gln	Leu	Met	Leu
	370					375					380				
Arg	Leu	Ile	Gln	Pro	Lys	Tyr	Phe	Leu	Pro	Ile	His	Gly	Glu	Tyr	Arg
385					390					395					400
Met	Leu	Lys	Ala	His	Gly	Glu	Thr	Gly	Val	Gln	Cys	Gly	Val	Asp	Glu
				405					410					415	
Asp	Asn	Val	Phe	Ile	Phe	Asp	Ile	Gly	Asp	Val	Leu	Ala	Leu	Thr	His
			420					425					430		
Asp	Ser	Ala	Arg	Lys	Ala	Gly	Arg	Ile	Pro	Ser	Gly	Asn	Val	Leu	Val
		435					440					445			
Asp	Gly	Ser	Gly	Ile	Gly	Asp	Ile	Gly	Asn	Val	Val	Ile	Arg	Asp	Arg
	450					455					460				
Lys	Leu	Leu	Ser	Glu	Glu	Gly	Leu	Val	Ile	Val	Val	Val	Ser	Ile	Asp
465					470					475					480
Phe	Asn	Thr	Asn	Lys	Leu	Leu	Ser	Gly	Pro	Asp	Ile	Ile	Ser	Arg	Gly
				485					490					495	
Phe	Val	Tyr	Met	Arg	Glu	Ser	Gly	Gln	Leu	Ile	Tyr	Asp	Ala	Gln	Arg
			500					505					510		

Lys Ile Lys Gly Asp Val Ile Ser Lys Leu Asn Ser Asn Lys Asp Ile
 515 520 525
 Gln Trp His Gln Ile Lys Ser Ser Ile Ile Glu Thr Leu His Pro Tyr
 530 535 540
 Leu Tyr Glu Lys Thr Ala Arg Lys Pro Met Ile Leu Pro Val Ile Met
 545 550 555 560
 Lys Val Asn Glu Asp Lys
 565

<210> 5617

<211> 58

<212> PRT

<213> S.epidermidis

<400> 5617

Asp Lys Trp Arg Val Ser Ile Tyr Leu Ser Ile Asn Arg Pro Ser Lys
 1 5 10 15
 Tyr His Ile Asn Leu Asp Gly His Phe Asn Tyr Asp Cys Phe Ser Ile
 20 25 30
 Ser Thr Asn Lys Ser Pro Val Ala Met Ala Ser Pro Leu Ala Thr Leu
 35 40 45
 Ile Cys Leu Ile Ile Pro Ser Asn Gly Ala
 50 55

<210> 5618

<211> 466

<212> PRT

<213> S.epidermidis

<400> 5618

Pro Asn Ile Leu Phe Arg Leu Ile Tyr Ser His Ile Leu Met Gly Val
 1 5 10 15
 Ile Leu Leu Asn Ser Asn Asn Asn Asn His Glu Gln Gln Arg Ser Leu
 20 25 30
 Asp Glu Ile Asn Asn Thr Ile Asn Phe Asn His Asn Asp Ser Ala Ser
 35 40 45
 Gln Lys Phe Leu Ala Phe Leu Gly Pro Gly Leu Leu Val Ala Val Gly
 50 55 60
 Tyr Met Asp Pro Gly Asn Trp Ile Thr Ser Met Gln Gly Gly Ala Gln
 65 70 75 80
 Tyr Gly Tyr Thr Leu Leu Phe Ile Ile Leu Ile Ser Ser Leu Ser Ala
 85 90 95
 Met Leu Leu Gln Ser Met Thr Val Arg Leu Gly Ile Ala Thr Gly Met
 100 105 110
 Asp Leu Ala Gln Met Thr Arg His Phe Leu Asn Lys Pro Val Ala Ile
 115 120 125
 Met Phe Trp Ile Ile Ala Glu Leu Ala Ile Ile Ala Thr Asp Ile Ala
 130 135 140
 Glu Val Ile Gly Ser Ala Ile Ala Leu Asp Leu Ile Phe Gly Ile Pro
 145 150 155 160
 Leu Ile Val Gly Ala Leu Ile Thr Val Phe Asp Val Phe Leu Leu Leu
 165 170 175
 Phe Ile Met Lys Phe Gly Phe Arg Lys Ile Glu Ala Ile Val Gly Thr
 180 185 190
 Leu Ile Phe Thr Val Leu Ala Ile Phe Val Phe Glu Val Tyr Ile Ser
 195 200 205

Ser Pro His Ile Ile Asp Met Leu Asn Gly Phe Val Pro His Lys Glu
 210 215 220
 Ile Ile Thr Asn Gln Gly Ile Leu Tyr Ile Ala Leu Gly Ile Ile Gly
 225 230 235 240
 Ala Thr Ile Met Pro His Asn Leu Tyr Leu His Ser Ser Ile Val Gln
 245 250 255
 Ser Arg Lys Tyr Asp Arg His Ser Ile His Glu Lys Ala Gln Ala Ile
 260 265 270
 Lys Tyr Ala Thr Ile Asp Ser Asn Ile Gln Leu Ser Ile Ala Phe Val
 275 280 285
 Val Asn Cys Leu Leu Leu Thr Leu Gly Ala Ala Leu Phe Phe Gly Thr
 290 295 300
 Lys Thr Glu Asp Leu Gly Phe Tyr Asp Leu Tyr Leu Ala Leu Lys
 305 310 315 320
 Thr Glu Pro Ala Leu Gly Ala Thr Leu Gly Gly Ile Met Ser Thr Leu
 325 330 335
 Phe Ala Val Ala Leu Leu Ala Ser Gly Gln Asn Ser Thr Ile Thr Gly
 340 345 350
 Thr Leu Ala Gly Gln Ile Val Met Glu Gly Phe Leu Lys Leu Ser Ile
 355 360 365
 Pro Asn Trp Leu Arg Arg Leu Ile Thr Arg Ser Leu Ala Val Ile Pro
 370 375 380
 Val Ile Ile Cys Leu Ile Val Phe Lys Gly Asn Thr Glu Lys Ile Glu
 385 390 395 400
 Gln Leu Leu Val Phe Ser Gln Val Phe Leu Ser Ile Ala Leu Pro Phe
 405 410 415
 Ser Leu Ile Pro Leu Gln Leu Ala Thr Ser Asn Gln Asn Leu Met Gly
 420 425 430
 Pro Phe Lys Asn Lys Thr Trp Ile Asn Ile Ile Ser Trp Leu Leu Ile
 435 440 445
 Ile Val Leu Ser Gly Leu Asn Val Tyr Leu Ile Ile Gln Thr Phe Gln
 450 455 460
 Glu Leu
 465

<210> 5619

<211> 77

<212> PRT

<213> S.epidermidis

<400> 5619

Val Asp Lys Leu Gly Ala Ile Leu Thr Ile Ile Lys Asn Tyr Gln Tyr
 1 5 10 15
 Arg Leu Lys Leu Tyr Met Ile Ile Asn His Arg Leu Ser Tyr Phe Tyr
 20 25 30
 Asn Tyr Asn Asp Phe Leu Phe Phe Ile Ser Leu Tyr Ala Cys Ser Ala
 35 40 45
 Ala Phe Cys Ser Asp Ser Phe Phe Val Phe Pro Leu Pro Ser Ala Thr
 50 55 60
 Ala Leu Phe Ser Lys Ile Thr Ser Asp Val Asn Ser Leu
 65 70 75

<210> 5620

<211> 299

<212> PRT

<213> S.epidermidis

<210> 5622
 <211> 100
 <212> PRT
 <213> S.epidermidis

<400> 5622
 Lys Val Phe Arg Thr Lys Asn Lys Lys His Leu Gln Ser Arg Lys Ile
 1 5 10 15
 Asp Val Glu Pro Val Phe Gly Phe Met Lys Ala Ile Leu Gly Phe Thr
 20 25 30
 Arg Met Ser Val Arg Gly Ile Asn Lys Val Lys Arg Glu Leu Gly Phe
 35 40 45
 Val Leu Met Ala Leu Asn Ile Arg Lys Val Thr Ala Gln Arg Ala Glu
 50 55 60
 Asn Asn Gln Lys Asn Asn Lys Lys Asp Asn Phe Tyr Ile Ile Ser Ile
 65 70 75 80
 Glu Ile Val Phe Phe Ile Tyr Leu Gly Thr Leu Ser Pro Thr Leu Phe
 85 90 95
 Ile Tyr Val Arg
 100

<210> 5623
 <211> 42
 <212> PRT
 <213> S.epidermidis

<400> 5623
 Val His Phe Arg Val Val Asn Leu Leu Arg Arg Asp Leu Met Ala Lys
 1 5 10 15
 Thr Ser His Leu Tyr Phe Arg Phe Ile Asp Asp Leu Phe Ile Ile Ile
 20 25 30
 Ile His Lys Leu Ile Ile Lys Leu Lys Lys
 35 40

<210> 5624
 <211> 591
 <212> PRT
 <213> S.epidermidis

<400> 5624
 His Glu Val Arg Thr Asn Ser Asn Val Asn Val Met Ser Trp Ser Ser
 1 5 10 15
 Phe Tyr Gly Val Ile Leu Met Thr Lys Lys Asp Val Ile Gln Leu Leu
 20 25 30
 Glu Lys Ile Ala Ile Tyr Met Glu Leu Lys Gly Glu Asn Thr Phe Lys
 35 40 45
 Val Ser Ala Tyr Arg Lys Ala Ala Gln Ser Leu Glu Val Asp Glu Arg
 50 55 60
 Thr Leu Glu Glu Ile Asp Asp Val Thr Glu Leu Lys Gly Ile Gly Lys
 65 70 75 80
 Gly Val Gly Glu Val Ile Asn Glu Phe Lys Thr Gln Gly Gln Ser Ser
 85 90 95
 Thr Leu Gln Thr Leu Gln Asp Glu Val Pro Glu Gly Leu Val Pro Leu
 100 105 110
 Leu Lys Ile Gln Gly Leu Gly Ser Lys Lys Ile Ala Lys Leu Tyr His
 115 120 125

Glu	Leu	Gln	Ile	Thr	Asp	Lys	Glu	Thr	Leu	Gln	Gln	Ala	Cys	Glu	Glu
130						135				140					
Gly	Lys	Val	Ser	Thr	Leu	Lys	Gly	Phe	Ala	Lys	Lys	Thr	Glu	Gln	Asn
145					150					155					160
Ile	Leu	Glu	Ala	Val	Lys	Ser	Ile	Gly	Ala	Lys	Lys	Asp	Arg	Tyr	Pro
				165					170					175	
Ile	Glu	Leu	Met	Arg	Gly	Leu	Asn	Gln	Glu	Ile	Val	Lys	Phe	Ile	Glu
			180					185					190		
Gln	Leu	Glu	Gly	Val	Glu	Gln	Tyr	Ser	Thr	Ala	Gly	Ser	Phe	Arg	Arg
		195					200					205			
Tyr	Lys	Glu	Met	Ser	Lys	Asp	Leu	Asp	Phe	Ile	Ile	Ser	Thr	Ser	Glu
210						215						220			
Pro	Lys	Lys	Val	Gln	Gln	Lys	Leu	Leu	Arg	Ile	Pro	Asn	Lys	Val	Lys
225					230					235					240
Asp	Val	Ala	Val	Gly	Asp	Thr	Lys	Ile	Ser	Leu	Glu	Leu	Ala	Tyr	Asp
				245					250					255	
Asp	Glu	Thr	Ile	Gly	Val	Asp	Phe	Arg	Leu	Ile	Glu	Pro	Ala	Ala	Phe
			260					265					270		
Tyr	His	Thr	Leu	Gln	His	Phe	Thr	Gly	Ser	Lys	Asp	His	Asn	Ile	Arg
		275					280					285			
Ile	Arg	Gln	Leu	Ala	Lys	Ala	Arg	Asp	Glu	Lys	Val	Ser	Glu	Tyr	Gly
	290					295					300				
Ile	Glu	Gln	Gln	Asp	Gly	Lys	Leu	Leu	Gln	Leu	Gln	Ser	Glu	Glu	Ala
305					310					315					320
Ile	Tyr	His	His	Phe	Gly	Val	Asp	Trp	Ile	Ala	Pro	Ala	Met	Arg	Glu
				325				330					335		
Asp	Gly	Ser	Glu	Phe	Asp	Lys	Asp	Leu	Ser	Gln	Ile	Ile	Gln	Leu	Asp
			340					345					350		
Asp	Ile	Asn	Gly	Asp	Leu	His	Met	His	Thr	Thr	Tyr	Ser	Asp	Gly	Ala
		355					360					365			
Phe	Ser	Ile	Lys	Glu	Met	Ile	Glu	Ala	Asn	Ile	Glu	Lys	Gly	Tyr	Glu
	370					375					380				
Phe	Met	Val	Ile	Thr	Asp	His	Ser	Gln	Ser	Leu	Lys	Val	Ala	His	Gly
385					390					395					400
Leu	Gln	Val	Asp	Arg	Leu	Leu	Arg	Gln	Asn	Glu	Glu	Ile	Lys	Gln	Leu
				405				410						415	
Asn	Glu	Glu	Tyr	Lys	Glu	Ile	Asp	Ile	Tyr	Ser	Gly	Thr	Glu	Met	Asp
			420					425				430			
Ile	Leu	Pro	Asp	Gly	Thr	Leu	Asp	Tyr	Asp	Asp	Glu	Val	Leu	Ala	Gln
		435					440					445			
Leu	Asp	Tyr	Val	Ile	Ala	Ala	Ile	His	Gln	Asn	Phe	Asn	Gln	Ser	Glu
	450					455					460				
Asp	Glu	Ile	Met	Lys	Arg	Leu	Glu	Thr	Ala	Cys	Arg	Asn	Pro	Tyr	Val
465					470					475					480
Arg	His	Ile	Ala	His	Pro	Thr	Gly	Arg	Ile	Ile	Gly	Arg	Arg	Lys	Gly
				485				490						495	
Tyr	Lys	Ala	Asn	Ile	Glu	Lys	Leu	Met	Asn	Leu	Ala	Glu	Glu	Thr	Asn
			500					505					510		
Thr	Ile	Leu	Glu	Ile	Asn	Ala	Asn	Pro	His	Arg	Leu	Asp	Leu	Asn	Ala
		515					520					525			
Glu	Ile	Val	Arg	Lys	Tyr	Pro	Lys	Val	Lys	Leu	Thr	Ile	Asn	Thr	Asp
	530					535					540				
Ala	His	His	Thr	Asn	His	Leu	Asp	Phe	Met	Lys	Tyr	Gly	Val	Ala	Thr
545					550					555					560
Ala	Gln	Lys	Gly	Phe	Val	Asn	Lys	Glu	Arg	Val	Ile	Asn	Thr	Met	Thr
				565				570						575	

Lys Glu Ala Phe Arg Ser Phe Val Glu Thr Asn Lys Tyr Lys Lys
 580 585 590

<210> 5625

<211> 573

<212> PRT

<213> S.epidermidis

<400> 5625

Lys Ser Ile Arg Trp Gln Ile Ile Met Ala Tyr Asp Gly Leu Phe Thr
 1 5 10 15
 Lys Lys Met Ile Glu Ser Leu Gln Gly Leu Val Ser Gly Arg Ile His
 20 25 30
 Lys Ile Asn Gln Pro Glu Asn Asp Thr Ile Ile Ile Val Ile Arg Gln
 35 40 45
 Asn Arg Lys Asn His Gln Leu Leu Leu Ser Ile His Pro Ser Phe Ser
 50 55 60
 Arg Leu Gln Leu Thr Thr Lys Lys Tyr Asp Asn Pro Phe Thr Pro Pro
 65 70 75 80
 Met Phe Ala Arg Val Phe Arg Lys His Leu Glu Gly Gly Phe Ile Lys
 85 90 95
 Ala Ile Arg Gln Val Gly Asn Asp Arg Arg Ile Glu Ile Asp Ile Glu
 100 105 110
 Ser Lys Asp Glu Ile Gly Asp Thr Ile Tyr Arg Thr Ile Ile Leu Glu
 115 120 125
 Ile Met Gly Lys His Ser Asn Leu Ile Leu Val Asp Asp Gln Arg Lys
 130 135 140
 Ile Ile Glu Gly Phe Lys His Leu Thr Pro Asn Thr Asn Gln Tyr Arg
 145 150 155 160
 Thr Val Met Pro Gly Phe Lys Tyr Glu Ala Pro Pro Asn Gln Asn Lys
 165 170 175
 Ile Asn Pro Tyr Glu Leu Thr Gly Gln Glu Val Leu Lys Tyr Ile Asp
 180 185 190
 Phe Asn Ala Gly Lys Ile Ala Lys Gln Leu Leu Asn Ile Cys Glu Gly
 195 200 205
 Phe Ser Pro Leu Ile Ala Asn Glu Ile Val Asn Arg Arg Gln Phe Met
 210 215 220
 Thr Gln Glu Thr Leu Pro Asp Ala Phe Asp Glu Val Met Ala Glu Thr
 225 230 235 240
 Lys Ser Ala Pro Thr Pro Val Phe His Lys Asn His Glu Thr Gly Lys
 245 250 255
 Glu Asp Phe Tyr Phe Met Lys Leu Asn Gln Phe Tyr Asp Asp Ile Val
 260 265 270
 Glu Tyr His Ser Leu His Glu Leu Leu Asp Arg Phe Tyr Asp Ala Arg
 275 280 285
 Gly Glu Arg Glu Arg Val Lys Gln Arg Ala Asn Asp Leu Val Arg Phe
 290 295 300
 Val Gln Gln Gln Leu Gln Lys Gln Gln Asn Lys Leu Ser Lys Leu Ile
 305 310 315 320
 Asp Glu Tyr Glu Ser Ala Lys Asn Lys Glu Thr Gln Gln Leu Tyr Gly
 325 330 335
 Glu Leu Ile Thr Ala Asn Ile Tyr Arg Ile Gln Gln Gly Asp Asp Ser
 340 345 350
 Val Ile Ala Leu Asn Tyr Tyr Thr Gly Glu Glu Val Lys Ile Pro Leu
 355 360 365
 Asn Pro Thr Lys Ser Pro Ser Thr Asn Ala Gln Tyr Tyr Tyr Lys Gln

370 375 380
 Tyr Asn Arg Met Lys Thr Arg Glu His Glu Leu Thr His Gln Ile Lys
 385 390 395 400
 Leu Thr Lys Glu Asn Ile Asp Tyr Phe Asp Asn Ile Glu Gln Gln Leu
 405 410 415
 Lys His Ile Thr Val Asp Asp Ile Asp Asp Ile Arg Asp Glu Leu Ala
 420 425 430
 Glu Gln Gly Phe Met Lys Gln Arg Lys Gln Ser Lys Lys Lys Lys Gln
 435 440 445
 Ser Lys Ile Gln Leu Gln Thr Tyr His Ser Thr Asp Gly Asp Thr Ile
 450 455 460
 Leu Val Gly Lys Asn Asn Lys Gln Asn Asp Tyr Leu Thr Asn Lys Lys
 465 470 475 480
 Ala Arg Lys Asn His Leu Trp Phe His Thr Lys Asp Ile Pro Gly Ser
 485 490 495
 His Val Val Ile Leu Asn Glu Ser Pro Ser Glu Thr Thr Ile Lys Glu
 500 505 510
 Ala Ala Met Leu Ala Gly Tyr Phe Ser Lys Ala Gly Ser Ser Ala Gln
 515 520 525
 Ile Pro Val Asp Tyr Thr Glu Ile Arg His Val His Lys Pro Ser Gly
 530 535 540
 Ala Lys Pro Gly Phe Val Thr Tyr Asp Asn Gln Lys Thr Leu Phe Ala
 545 550 555 560
 Thr Pro Asp Tyr Asp His Ile Gln Gln Met Lys Glu Ser
 565 570

<210> 5626
 <211> 52
 <212> PRT
 <213> S.epidermidis

<400> 5626
 Leu Ser Thr Ser Ile Leu Lys Pro Leu Ala Ala Ile Ile Pro Asn Asn
 1 5 10 15
 Lys Ile Glu Thr Pro Pro Ile Thr Gly Val Gly Ile Glu Asp Ile Lys
 20 25 30
 Ala Val Asn Leu Pro Ile Asn Ala Arg Met Ile Ala Ile Thr Ala Ala
 35 40 45
 Pro Pro Ile Thr
 50

<210> 5627
 <211> 170
 <212> PRT
 <213> S.epidermidis

<400> 5627
 Gln Ser Lys Ser Phe Glu Arg Val Tyr Lys Val Lys Val Ala Val Ile
 1 5 10 15
 Met Gly Ser Ser Ser Asp Trp Lys Ile Met Lys Glu Ser Cys Ser Met
 20 25 30
 Leu Glu Glu Phe Glu Ile Pro Tyr Glu Lys Lys Val Val Ser Ala His
 35 40 45
 Arg Thr Pro Gln Met Met Phe Asn Phe Ala Ser Gln Ala Arg Gln Asn
 50 55 60
 Gly Phe Asp Ile Ile Ile Ala Gly Ala Gly Gly Ala Ala His Leu Pro

65					70					75				80	
Gly	Met	Val	Ala	Ser	Met	Thr	Thr	Leu	Pro	Val	Ile	Gly	Val	Pro	Ile
				85					90					95	
Glu	Ser	Lys	Ser	Leu	Lys	Gly	Leu	Asp	Ser	Leu	Leu	Ser	Ile	Val	Gln
			100					105					110		
Met	Pro	Gly	Gly	Ile	Pro	Val	Ala	Thr	Thr	Ala	Ile	Gly	Lys	Ser	Gly
		115					120					125			
Ala	Lys	Asn	Ala	Gly	Ile	Leu	Ala	Ala	Arg	Met	Leu	Gly	Ile	Thr	Asn
	130					135					140				
Glu	Ser	Val	Gln	Asn	Asn	Leu	Glu	Asn	Tyr	Glu	Lys	Ser	Leu	Val	Ala
145				150						155					160
Lys	Val	Glu	Glu	Met	Gln	Asn	Glu	Leu	Gln						
				165					170						

<210> 5628

<211> 53

<212> PRT

<213> S.epidermidis

<400> 5628

Phe	Asn	Met	Arg	Lys	Val	Gln	Cys	Ile	Ile	Cys	Asp	Thr	Lys	Val	Phe
1				5					10					15	
Ile	Asp	Glu	His	Thr	Val	Glu	Ala	Lys	Arg	Leu	Lys	Asn	Asn	Pro	Ile
			20					25					30		
Arg	Thr	Phe	Met	Cys	Asp	Asp	Cys	Lys	Ser	Arg	Leu	Asp	Thr	Pro	Lys
		35					40					45			
Gln	Ser	Lys	Arg	Asp											
	50														

<210> 5629

<211> 204

<212> PRT

<213> S.epidermidis

<400> 5629

Glu	Asn	Arg	Ser	Glu	Pro	Pro	Leu	Ala	Leu	Lys	Asp	Leu	Phe	Asn	Asn
1				5					10					15	
Phe	Phe	Val	Val	Glu	Glu	Glu	Glu	Glu	Val	Glu	Gly	Pro	Glu	Glu	Arg
			20					25					30		
Glu	Ser	Ser	Arg	Ser	Arg	Glu	Arg	Val	Gln	Glu	Arg	Glu	Asp	Tyr	Asn
		35					40					45			
Arg	Asn	Glu	Asn	Gln	Ala	Thr	Pro	Gln	Thr	Phe	Asn	Asn	Lys	Gln	Gln
	50					55					60				
Ala	Ile	Lys	Ser	Val	Pro	Gln	Lys	Asn	Thr	Leu	Arg	Ser	Asn	Thr	Thr
65				70						75				80	
Ser	Glu	Glu	Arg	Asn	Tyr	Arg	Met	Asn	Asn	Asn	Ser	Lys	Asn	Asn	Ser
			85						90					95	
Arg	Asn	Val	Val	Thr	Met	Asn	Gln	Ala	Ser	Gln	Ser	Tyr	Ala	Ala	Gln
		100						105					110		
Glu	Ser	Ser	Lys	Met	Cys	Leu	Phe	Glu	Pro	Arg	Val	Phe	Ser	Asp	Thr
		115					120					125			
Gln	Asp	Ile	Ala	Asp	Glu	Leu	Lys	Asn	Arg	Arg	Ala	Thr	Leu	Val	Asn
	130					135					140				
Leu	Gln	Arg	Ile	Asp	Gln	Val	Ser	Ala	Lys	Arg	Ile	Ile	Asp	Phe	Leu
145				150						155					160
Ser	Gly	Thr	Val	Tyr	Ala	Ile	Gly	Gly	Asp	Ile	Gln	Arg	Val	Gly	Thr

			165					170					175		
Asp	Ile	Phe	Leu	Cys	Thr	Pro	Asp	Asn	Val	Glu	Val	Ala	Gly	Ser	Ile
			180					185					190		
Thr	Asp	His	Ile	Glu	Asn	Met	Glu	Gln	His	Tyr	Glu				
		195					200								

<210> 5630

<211> 471

<212> PRT

<213> S.epidermidis

<400> 5630

Phe	Val	Arg	Arg	Cys	Leu	Ser	Met	Glu	Glu	His	Tyr	Tyr	Val	Ser	Ile
1				5					10					15	
Asp	Ile	Gly	Ser	Ser	Ser	Val	Lys	Thr	Ile	Val	Gly	Glu	Lys	Phe	His
		20						25					30		
Asn	Gly	Ile	Asn	Val	Ile	Gly	Thr	Gly	Gln	Thr	Tyr	Thr	Ser	Gly	Ile
		35					40					45			
Lys	Asn	Gly	Leu	Ile	Asp	Asp	Phe	Asp	Ile	Ala	Arg	Gln	Ala	Ile	Lys
	50					55				60					
Asp	Thr	Ile	Lys	Lys	Ala	Ser	Ile	Ala	Ser	Gly	Val	Asp	Ile	Lys	Asp
65					70					75				80	
Val	Phe	Leu	Lys	Leu	Pro	Ile	Ile	Gly	Thr	Glu	Val	Tyr	Asp	Glu	Ser
				85					90					95	
Asn	Glu	Ile	Glu	Phe	Tyr	Glu	Asp	Thr	Glu	Ile	Asp	Gly	Thr	His	Ile
			100					105					110		
Glu	Ser	Val	Leu	Glu	Gly	Ile	Arg	Asp	Lys	Asn	Asp	Val	Pro	Glu	Thr
		115					120					125			
Glu	Val	Ile	Asn	Val	Phe	Pro	Ile	Arg	Phe	Val	Val	Asp	Lys	Asp	Asn
	130					135					140				
Glu	Val	Ser	Asp	Pro	Lys	Glu	Leu	Ile	Ala	Arg	His	Ser	Leu	Lys	Val
145					150					155					160
Asp	Ala	Gly	Val	Ile	Ala	Ile	Gln	Lys	Ser	Ile	Leu	Ile	Asn	Met	Ile
				165					170					175	
Lys	Cys	Val	Glu	Ala	Cys	Gly	Val	Asp	Val	Leu	Asp	Val	Tyr	Ser	Asp
			180					185					190		
Ala	Tyr	Asn	Tyr	Gly	Ser	Ile	Leu	Thr	Pro	Thr	Glu	Lys	Glu	Leu	Gly
		195					200					205			
Ala	Cys	Val	Ile	Asp	Ile	Gly	Glu	Asp	Leu	Thr	Gln	Val	Ala	Phe	Tyr
	210					215					220				
Glu	Arg	Gly	Glu	Leu	Val	Asp	Ala	Glu	Ser	Ile	Glu	Met	Ala	Gly	Arg
225					230					235					240
Asp	Ile	Thr	Asp	Asp	Ile	Ala	Gln	Gly	Leu	Asn	Thr	Thr	Tyr	Asp	Thr
				245					250					255	
Ala	Glu	Lys	Val	Lys	His	Gln	Tyr	Gly	His	Ala	Phe	Tyr	Asp	Ser	Ala
			260					265					270		
Ser	Asp	Gln	Asp	Val	Phe	Ser	Val	Asp	Gln	Val	Asp	Ser	Asp	Glu	His
		275					280					285			
Val	Gln	Tyr	Thr	Gln	Lys	Asp	Leu	Ser	Asp	Phe	Ile	Glu	Gln	Arg	Val
	290					295					300				
Glu	Asp	Ile	Phe	Phe	Glu	Val	Phe	Asp	Val	Leu	Gln	Glu	Leu	Gly	Leu
305					310					315					320
Thr	Lys	Val	Asn	Gly	Gly	Phe	Val	Val	Thr	Gly	Gly	Ser	Ala	Asn	Leu
				325					330					335	
Leu	Gly	Val	Lys	Glu	Leu	Leu	Gln	Asp	Met	Val	Ser	Glu	Lys	Val	Arg
			340					345					350		

Ile His Thr Pro Ser Gln Met Gly Ile Arg Lys Pro Glu Phe Ser Ser
 355 360 365
 Ala Ile Ser Thr Ile Ser Ser Ser Ile Ala Phe Asp Glu Leu Leu Asp
 370 375 380
 Tyr Val Thr Ile Ser Tyr Gln Asp Asn Glu Glu Phe Glu Glu Glu Val
 385 390 395 400
 Ile Glu Thr Asp Lys Asp Thr Glu Thr Lys Ser Ser Gly Phe Asp Trp
 405 410 415
 Phe Lys Arg Lys Ser Asn Lys Lys Glu Asn Asp Glu Val Ala Pro Glu
 420 425 430
 Ala Pro Arg Glu Glu Ser Tyr Glu Asp Arg Glu Asn His Leu Glu Asp
 435 440 445
 Glu Gln Gln Thr Glu Gly Lys Ala Lys Glu Glu Ser Lys Phe Lys Lys
 450 455 460
 Leu Met Lys Ser Leu Phe Glu
 465 470

<210> 5631

<211> 111

<212> PRT

<213> S.epidermidis

<400> 5631

Lys Leu Arg Arg Ile Gly Ile Met Ala Ile Val Lys Val Thr Asp Ser
 1 5 10 15
 Asp Phe Asp Ser Lys Ile Glu Ser Gly Val Lys Leu Val Asp Phe Trp
 20 25 30
 Ala Thr Trp Cys Gly Pro Cys Lys Met Ile Ala Pro Val Leu Glu Glu
 35 40 45
 Leu Ala Gly Asp Tyr Asp Gly Lys Ala Asp Ile Leu Lys Leu Asp Val
 50 55 60
 Asp Glu Asn Pro Ser Thr Ala Ala Lys Tyr Glu Val Met Ser Ile Pro
 65 70 75 80
 Thr Leu Ile Val Phe Lys Asp Gly Glu Pro Val Asp Lys Val Val Gly
 85 90 95
 Phe Gln Leu Lys Glu Asn Leu Ala Glu Val Leu Asp Lys His Leu
 100 105 110

<210> 5632

<211> 74

<212> PRT

<213> S.epidermidis

<400> 5632

Met Val Arg Arg Arg Leu Met Glu Gln Asn Asn Asp Asn Asn His Leu
 1 5 10 15
 Tyr Thr Leu Ile Lys His Cys Asn Glu Phe Leu Tyr Arg Arg Asp Asp
 20 25 30
 Tyr Arg Ile Pro Ser Asp Ser Gln Ser Asp His Ser Asn Asn Glu Asn
 35 40 45
 Ile Leu Lys Thr Met Asn Asp Glu Val Phe Lys His Ser Ile Glu Ile
 50 55 60
 Phe Lys Arg Ala Lys Lys Asn Leu Asn His
 65 70

<210> 5633

<211> 49
 <212> PRT
 <213> S.epidermidis

<400> 5633
 Ile Asn Ala Gly Leu Leu Cys Lys Thr Leu Gly His Phe Ala Tyr Lys
 1 5 10 15
 Phe Leu Arg Ile Ser Asn Leu Asn Tyr Met Phe Arg Arg Gly Asp Ser
 20 25 30
 Phe Trp Leu Asn Gln Arg Met Asn Phe Thr Leu Glu Asp Tyr Ile Arg
 35 40 45
 Tyr

<210> 5634
 <211> 54
 <212> PRT
 <213> S.epidermidis

<220>
 <221> UNSURE
 <222> (3)
 <223> Identity of amino acid sequences at the above locations are unknown.

<400> 5634
 Ile Met Xaa Phe Leu Asn Lys Ser Leu Phe Gln Asn Ile Ser Pro Pro
 1 5 10 15
 Asn Asn Ile Tyr Thr Phe His Tyr Thr Leu Asn Phe Lys Leu Lys Ser
 20 25 30
 Ser Lys Asn Asn Leu Asn Ile Lys Cys Pro Ile Met Lys Gln Leu Tyr
 35 40 45
 Ile Ile Leu Lys Phe Ile
 50

<210> 5635
 <211> 51
 <212> PRT
 <213> S.epidermidis

<400> 5635
 Tyr Leu Asp Gly Leu Phe Ile Leu Lys Tyr Ile Glu Thr Arg His Leu
 1 5 10 15
 Ser Tyr Arg Tyr Gly Ile Leu Ser Gly Val Phe Leu Phe Asn Cys Tyr
 20 25 30
 Lys Phe Ile Glu Lys Tyr Ile Ile Leu Asp Phe Ser Ser Phe Leu Thr
 35 40 45
 Leu Val Lys
 50

<210> 5636
 <211> 384
 <212> PRT
 <213> S.epidermidis

<400> 5636
 Arg Met Leu Gly Glu Gln Tyr Thr Gln Ile Lys Arg Pro Ala Asn Arg

```

1           5           10           15
Leu Thr Glu Lys Ile Leu Gly Trp Phe Ser Trp Val Phe Leu Leu Ile
      20      25      30
Leu Thr Ile Val Ser Met Phe Ile Ala Leu Val Ser Phe Ser Asn Asp
      35      40      45
Thr Ser Ile Ala Asn Leu Glu Asn Thr Leu Asn Asn Asn Glu Leu Val
      50      55      60
Gln Gln Ile Leu Ala Asn Asn Asp Leu Ser Thr Thr Gln Phe Val Ile
65      70      75      80
Trp Leu Gln Asn Gly Val Trp Ala Ile Ile Val Tyr Phe Ile Val Cys
      85      90      95
Leu Leu Ile Ser Phe Leu Ala Leu Ile Ser Met Asn Ile Arg Ile Leu
      100      105      110
Ser Gly Phe Leu Phe Leu Ile Ala Ile Val Thr Ile Pro Leu Val
      115      120      125
Leu Leu Ile Val Thr Leu Ile Ile Pro Ile Leu Phe Phe Ile Ile Ala
      130      135      140
Met Met Met Phe Ala Arg Arg Asp Arg Ile Glu Thr Val Pro Ser Tyr
145      150      155      160
Tyr Asn Glu Tyr Asp Gln Pro Tyr Tyr Asp Glu Arg Gly Phe Tyr Glu
      165      170      175
Pro Glu Ser Arg Asn Glu His Gly Tyr Asn Asp Asp Val Tyr Glu Pro
      180      185      190
Met His Thr Lys Lys Glu Asp Arg Asn Thr Arg Arg Gln Phe Asn Arg
      195      200      205
Asn Ala Gln Gln Gln Asp Ser Tyr Asn Gly Ile Thr Asp Asn Gln Pro
      210      215      220
Asp Glu Asp Thr Ser Ser Asp Gln Leu Tyr Ser Asp Glu Tyr Val Asp
225      230      235      240
Asn Glu Asp Lys Tyr Ser Gln Phe Pro Lys Arg Ala Val Glu Ser Glu
      245      250      255
Tyr Ala Ser Gln Thr Glu Asp Glu Pro Thr Val Met Ser Arg Gln
      260      265      270
Ala Lys Tyr Asn Lys Lys Ser Lys Asn Thr Asp Phe Glu Asp Ala Gln
      275      280      285
Gln Glu His Met Glu Gly Asn Gln Phe Asp Asp Val Gly Val Val Glu
      290      295      300
Pro Gln Ile Asp Pro Lys Glu Leu Lys Ala Gln Arg Lys Arg Glu Lys
305      310      315      320
Ala Glu Ile Arg Ala Lys Lys Lys Glu Lys Arg Lys Ala Tyr Asn Lys
      325      330      335
Arg Met Lys Glu Arg Arg Lys Asn Gln Pro Ser Ala Val Asn Gln Arg
      340      345      350
Arg Met Asn Tyr Glu Glu Arg Arg Gln Met Ile Asn Asn Glu Gln Glu
      355      360      365
Asp Thr Asp Asn Asn Leu Asn Gln Gln Glu Asp Ser Lys Lys Glu Asn
      370      375      380

```

<210> 5637

<211> 668

<212> PRT

<213> S.epidermidis

<400> 5637

```

Ser Met Ile Gly Lys Val Ile Asn Glu Arg Tyr Thr Ile Thr Asp Lys
1           5           10           15

```

Leu Gly Gly Gly Gly Met Ser Ile Val Tyr Leu Ala Val Asp Ser Ile
 20 25 30
 Leu Asn Arg Lys Val Ala Ile Lys Ala Ile Ser Ile Pro Pro Ser Glu
 35 40 45
 Lys Glu Glu Thr Phe Lys Arg Phe Glu Arg Glu Val His Asn Ser Ser
 50 55 60
 Gln Leu Ser His Glu Asn Ile Val Ser Met Ile Asp Val Asp Glu Glu
 65 70 75 80
 Asp Asp Cys Phe Tyr Ile Val Met Glu Tyr Ile Glu Gly Pro Thr Leu
 85 90 95
 Ala Glu Tyr Ile His Ser His Gly Pro Leu Ser Val Glu Thr Ala Ile
 100 105 110
 Gln Phe Thr Glu Gln Ile Leu Ser Gly Ile Lys His Ala His Asp Met
 115 120 125
 Arg Ile Val His Arg Asp Ile Lys Pro Gln Asn Ile Leu Ile Asp Lys
 130 135 140
 Asn Lys Lys Leu Gln Ile Phe Asp Phe Gly Ile Ala Lys Ala Leu Ser
 145 150 155 160
 Glu Thr Ser Leu Thr Gln Thr Asn His Val Leu Gly Thr Val Gln Tyr
 165 170 175
 Leu Ser Pro Glu Gln Ala Lys Gly Glu Ala Thr Asp Glu Ser Thr Asp
 180 185 190
 Ile Tyr Ser Ile Gly Ile Val Leu Tyr Glu Met Leu Val Gly Glu Pro
 195 200 205
 Pro Phe Asn Gly Glu Thr Ala Val Ser Ile Ala Ile Lys His Ile Gln
 210 215 220
 Asp Ser Ile Pro Asn Ile Thr Thr Asp Lys Arg Asp Asp Val Pro Gln
 225 230 235 240
 Ser Leu Ser Asn Val Val Leu Arg Ala Thr Glu Lys Asp Lys Tyr His
 245 250 255
 Arg Tyr His Thr Val Gln Glu Met Cys Asp Asp Leu Thr Ser Ala Leu
 260 265 270
 His Glu Asn Arg Leu Asn Glu Glu Lys Tyr Glu Leu Asp Lys Thr Lys
 275 280 285
 Thr Val Pro Leu Thr Lys Asp Asp Leu Asn His Lys Ile Tyr Asp Glu
 290 295 300
 Gln Asn Gln Asn Asp Leu Asn Lys Thr Met Gln Ile Pro Ile Val Asn
 305 310 315 320
 Asp Ser Ile Lys Gln Gln Glu Phe Gln Ser Ser Glu Pro Arg Tyr Tyr
 325 330 335
 Gln Lys Ser Asp Lys Lys Arg Ser Lys Met Lys Ile Ala Ile Leu Ser
 340 345 350
 Ile Ile Phe Val Ile Leu Leu Ile Gly Leu Phe Ser Phe Val Ala Met
 355 360 365
 Ala Val Phe Gly Asn Lys Tyr Glu Glu Met Pro Asp Leu Lys Gly Lys
 370 375 380
 Thr Glu Lys Gln Ala Glu Lys Val Leu Asp Ser His His Leu Lys Val
 385 390 395 400
 Gly Asp Ile Ser Arg Asn Tyr Ser Asp Lys Tyr Pro Glu Asn Gln Ile
 405 410 415
 Ile Lys Thr Asn Pro Asp Ser Gly Glu Arg Val Glu Gln Gly Asn Arg
 420 425 430
 Val Asp Ile Val Leu Ser Lys Gly Pro Glu Lys Val Lys Met Pro Asn
 435 440 445
 Val Leu Gly Met Ser Lys Asn Asp Ala Leu Lys Lys Leu Lys Ala Ile
 450 455 460

Gly Phe Lys Asp Ile His Val Glu Gln Ala Tyr Ser Gln Thr Tyr Glu
 465 470 475 480
 Lys Gly Leu Ile Ser Glu Gln Ser Val Val Ala Asn Ser Glu Val Ala
 485 490 495
 Val Asn Asn His His Ile Thr Ile Tyr Glu Ser Leu Gly Val Arg Gln
 500 505 510
 Val Tyr Val Asn Asn Tyr Glu Asn Lys Ser Tyr Glu Ser Ala Lys Lys
 515 520 525
 Glu Leu Glu Asp Lys Gly Phe Lys Val Gln Val Thr Lys Glu Asn Asn
 530 535 540
 Asp Asp Val Glu Lys Gly Asn Val Ile Ser Gln Ser Pro Lys Asp Lys
 545 550 555 560
 Thr Val Asp Glu Gly Ser Thr Ile Leu Leu Val Val Ser Lys Gly Glu
 565 570 575
 Lys Ser Glu Glu Asp Asp Asp Glu Glu Asp Lys Asp Thr Thr Thr Lys
 580 585 590
 Asn Glu Thr Val Lys Val Pro Tyr Thr Gly Lys Lys Ser Lys Ser Gln
 595 600 605
 Lys Val Glu Val Phe Ile Arg Asp Ile Glu Asn Lys Gly Asp Ser Ala
 610 615 620
 Val Gln Thr Phe Asn Ile Lys Ser Asp Lys Thr Ile Asn Ile Pro Leu
 625 630 635 640
 Lys Ile Lys Lys Gly Ser Asp Ala Gly Tyr Thr Ile Arg Val Asp Asn
 645 650 655
 Lys Ile Val Ala Asp Lys Asp Val Ser Tyr Asp Gly
 660 665

<210> 5638

<211> 53

<212> PRT

<213> S.epidermidis

<400> 5638

Lys Trp Ile Gly Cys Gln Gln Lys Thr Thr Lys Lys Ser Ala Thr Ala
 1 5 10 15
 Ala Lys Leu Asn Asp Pro Ser Ile Ala Thr Gln Pro Ile Asn Gly Gly
 20 25 30
 Thr Ala Pro Gly Lys Leu Pro Thr Thr Val Phe Gln Val Val Trp Arg
 35 40 45
 Leu Asp Gln Ile Glu
 50

<210> 5639

<211> 95

<212> PRT

<213> S.epidermidis

<400> 5639

Leu Tyr Lys Gly Glu Phe Asn Met Glu Gln Lys Ser Tyr Val Ile Thr
 1 5 10 15
 Asp Glu Thr Gly Ile His Ala Arg Pro Ala Thr Met Leu Val Gln Thr
 20 25 30
 Ala Ser Lys Phe Asp Ser Asp Ile Gln Leu Glu Tyr Asn Gly Lys Lys
 35 40 45
 Val Asn Leu Lys Ser Ile Met Gly Val Met Ser Leu Gly Val Gly Lys
 50 55 60

Asp	Ala	Glu	Ile	Thr	Ile	Tyr	Ala	Asp	Gly	Ser	Asp	Glu	Thr	Asp	Ala
65					70					75					80
Ile	Gln	Ser	Ile	Thr	Asp	Val	Leu	Ser	Lys	Glu	Gly	Leu	Ala	Glu	
				85					90					95	

<210> 5640

<211> 415

<212> PRT

<213> S.epidermidis

<400> 5640

Gly	Tyr	Glu	Gly	Gly	Thr	Ser	Met	Ser	Phe	Phe	Lys	Arg	Leu	Lys	Asp
1				5					10					15	
Lys	Phe	Ser	Ser	Lys	Ser	Glu	Asp	Asp	Ile	Gln	Lys	Asp	Leu	Asp	Glu
			20					25					30		
Thr	Val	Asp	Ser	Asn	Ala	Asn	Ser	Asp	Ser	Asp	Ser	Met	Asp	Pro	Asn
			35				40					45			
Asp	Ser	Asp	Glu	Gln	Val	Lys	Pro	Lys	Lys	Lys	Pro	Lys	Lys	Leu	Ser
	50					55					60				
Glu	Ala	Asp	Phe	Asp	Glu	Asp	Gly	Leu	Ile	Ser	Ile	Glu	Asp	Phe	Glu
65					70					75					80
Glu	Ile	Glu	Ala	Gln	Lys	Ile	Gly	Ala	Lys	Phe	Lys	Ala	Gly	Leu	Glu
				85				90						95	
Lys	Ser	Arg	Gln	Asn	Phe	Gln	Glu	Gln	Leu	Asn	Asn	Leu	Ile	Ala	Arg
			100					105					110		
Tyr	Arg	Lys	Val	Asp	Glu	Asp	Phe	Phe	Glu	Ala	Leu	Glu	Glu	Met	Leu
		115					120						125		
Ile	Thr	Ala	Asp	Val	Gly	Phe	Asn	Thr	Val	Met	Lys	Leu	Thr	Asp	Glu
	130					135					140				
Leu	Arg	Thr	Glu	Ala	Gln	Arg	Arg	Asn	Ile	Gln	Glu	Thr	Glu	Asp	Leu
145					150					155					160
Arg	Glu	Val	Ile	Val	Glu	Lys	Ile	Val	Glu	Ile	Tyr	His	Gln	Glu	Asp
				165					170					175	
Asp	Tyr	Ser	Glu	Ala	Met	Asn	Ile	Glu	Asp	Gly	Arg	Leu	Asn	Val	Ile
			180					185					190		
Leu	Met	Val	Gly	Val	Asn	Gly	Val	Gly	Lys	Thr	Thr	Thr	Ile	Gly	Lys
		195					200						205		
Leu	Ala	Tyr	Arg	Tyr	Gln	Gln	Glu	Gly	Lys	Lys	Val	Met	Leu	Ala	Ala
	210					215					220				
Gly	Asp	Thr	Phe	Arg	Ala	Gly	Ala	Ile	Gln	Gln	Leu	Asn	Val	Trp	Gly
225					230					235					240
Glu	Arg	Val	Gly	Val	Glu	Val	Val	Ser	Gln	Asn	Glu	Gly	Ser	Asp	Pro
				245					250					255	
Ala	Ala	Val	Val	Tyr	Asp	Ala	Ile	Asn	Ala	Ala	Lys	Asn	Lys	Gly	Val
			260					265					270		
Asp	Ile	Leu	Ile	Cys	Asp	Thr	Ala	Gly	Arg	Leu	Gln	Asn	Lys	Ser	Asn
		275					280					285			
Leu	Met	Gln	Glu	Leu	Asp	Lys	Met	Lys	Arg	Val	Ile	Asn	Arg	Ala	Ile
	290					295					300				
Pro	Asp	Ala	Pro	His	Glu	Ala	Leu	Leu	Cys	Leu	Asp	Ala	Thr	Thr	Gly
305					310					315					320
Gln	Asn	Ala	Leu	Ser	Gln	Ala	Arg	Ser	Phe	Lys	Glu	Val	Thr	Asn	Val
				325					330					335	
Ser	Gly	Ile	Val	Leu	Thr	Lys	Leu	Asp	Gly	Thr	Ala	Lys	Gly	Gly	Ile
			340					345					350		
Val	Leu	Ala	Ile	Arg	Asn	Glu	Leu	His	Ile	Pro	Val	Lys	Tyr	Val	Gly

		355						360					365						
Leu	Gly	Glu	Lys	Met	Asp	Asp	Leu	Gln	Pro	Phe	Asn	Pro	Glu	Ser	Tyr				
	370					375					380								
Val	Tyr	Gly	Leu	Phe	Ala	Asp	Met	Ile	Glu	Gln	Asn	Glu	Asp	Ile	Pro				
385					390					395					400				
Glu	Glu	Ile	Ser	Arg	Asn	Ser	Ser	Val	Glu	Ser	Glu	Glu	Gly	Asn					
				405					410					415					

<210> 5641

<211> 382

<212> PRT

<213> S.epidermidis

<400> 5641

Arg	Ser	Glu	Gly	Phe	Asn	Arg	Cys	His	Ser	Phe	Ile	Phe	Ile	Gly	Gly				
1				5					10					15					
Asn	Cys	Met	Asn	Pro	Leu	Leu	Ser	Phe	Lys	Asp	Val	Ser	Lys	Gly	Phe				
			20					25					30						
Glu	Asp	Val	Gln	Ile	Leu	Asn	Glu	Ile	Asn	Ile	Asp	Ile	Glu	Pro	Gly				
		35					40					45							
Tyr	Phe	Tyr	Thr	Leu	Leu	Gly	Pro	Ser	Gly	Cys	Gly	Lys	Thr	Thr	Ile				
	50					55					60								
Leu	Lys	Leu	Ile	Ala	Gly	Phe	Glu	Tyr	Pro	Asp	Ser	Gly	Asp	Ile	Ile				
65					70					75					80				
Tyr	Lys	Asp	Lys	Pro	Ile	Gly	Lys	Met	Pro	Pro	Asn	Lys	Arg	Lys	Val				
				85					90					95					
Asn	Thr	Val	Phe	Gln	Asp	Tyr	Ala	Leu	Phe	Pro	His	Leu	Asn	Val	Phe				
			100					105					110						
Asp	Asn	Ile	Ala	Tyr	Gly	Leu	Lys	Leu	Lys	Lys	Leu	Ser	Lys	Ser	Glu				
		115					120						125						
Ile	Lys	Arg	Lys	Val	Thr	Glu	Ala	Leu	Gln	Leu	Val	Lys	Leu	Ser	Gly				
	130					135					140								
Tyr	Glu	His	Arg	Gln	Ile	Gln	Gly	Met	Ser	Gly	Gly	Gln	Lys	Gln	Arg				
145					150					155					160				
Val	Ala	Ile	Ala	Arg	Ala	Ile	Val	Asn	Glu	Pro	Glu	Ile	Leu	Leu	Leu				
				165					170					175					
Asp	Glu	Ser	Leu	Ser	Ala	Leu	Asp	Leu	Lys	Leu	Arg	Thr	Glu	Met	Gln				
			180					185					190						
Tyr	Leu	Leu	Arg	Glu	Leu	Gln	Ser	Arg	Leu	Gly	Ile	Thr	Phe	Ile	Phe				
	195						200					205							
Val	Thr	His	Asp	Gln	Glu	Glu	Ala	Leu	Ala	Leu	Ser	Asp	Tyr	Ile	Phe				
	210					215					220								
Val	Met	Lys	Asp	Gly	Lys	Ile	Gln	Gln	Phe	Gly	Thr	Pro	Ile	Asp	Ile				
225					230					235					240				
Tyr	Asp	Glu	Pro	Val	Asn	Arg	Phe	Val	Ala	Asp	Phe	Ile	Gly	Glu	Ser				
				245					250					255					
Asn	Ile	Val	His	Gly	Thr	Met	Val	Glu	Asp	Phe	Val	Val	Asn	Ile	Tyr				
			260					265					270						
Gly	Gln	Asn	Phe	Asp	Cys	Val	Asp	Met	Gly	Ile	Lys	Glu	Asn	Lys	Lys				
		275					280					285							
Val	Glu	Val	Val	Ile	Arg	Pro	Glu	Asp	Ile	Ser	Leu	Val	Ser	Gln	Asn				
	290					295					300								
Asp	Gly	Leu	Phe	Lys	Ala	Lys	Val	Asp	Ser	Met	Leu	Phe	Arg	Gly	Val				
305					310					315					320				
His	Tyr	Glu	Ile	Cys	Cys	Lys	Asp	Arg	Lys	Gly	Tyr	Glu	Trp	Val	Ile				
				325					330					335					

Gln Ser Thr Lys Lys Ala Asn Val Gly Ser Glu Val Gly Leu Tyr Phe
 340 345 350
 Glu Pro Glu Ala Ile His Ile Met Val Pro Gly Glu Thr Glu Glu Glu
 355 360 365
 Phe Asp Lys Arg Ile Glu Ser Tyr Glu Asp Tyr His His Ala
 370 375 380

<210> 5642

<211> 202

<212> PRT

<213> S.epidermidis

<400> 5642

Phe Ile Glu Gly Glu Asn Asp Met Glu Asp Ile Val Ile Ala Thr Asn
 1 5 10 15
 Asn Gln Gly Lys Ile Asn Asp Phe Lys Ala Ile Phe Lys Asn Gln His
 20 25 30
 Val Ile Gly Ile Ser Glu Leu Ile Glu Asp Phe Asp Val Glu Glu Thr
 35 40 45
 Gly Ala Thr Phe Glu Glu Asn Ala Arg Leu Lys Ser Glu Ala Ala Ala
 50 55 60
 His Ala Leu Asn Lys Arg Val Ile Ala Asp Asp Ser Gly Leu Glu Val
 65 70 75 80
 Phe Ala Leu Asn Gly Glu Pro Gly Val Tyr Ser Ala Arg Tyr Ala Gly
 85 90 95
 Leu Gly Lys Asn Asp Glu Asp Asn Ile Glu Lys Leu Leu Thr Asn Leu
 100 105 110
 Glu Asp Val Gln Asp Arg Arg Ala Gln Phe Val Cys Val Ile Ser Met
 115 120 125
 Ser Ala Pro Asn Glu Lys Thr Lys Thr Phe Lys Gly Thr Val Ser Gly
 130 135 140
 Val Ile Thr Thr Glu Arg His Gly Lys Asn Gly Phe Gly Tyr Asp Pro
 145 150 155 160
 Ile Phe Phe Val Pro Glu Leu Asn Lys Thr Met Ala Glu Ile Thr Asn
 165 170 175
 Asp Glu Lys Gly Lys Ile Ser His Arg Gly Asn Ala Ile Arg Leu Leu
 180 185 190
 Lys Glu Tyr Leu Glu Gly Glu Gln His Val
 195 200

<210> 5643

<211> 735

<212> PRT

<213> S.epidermidis

<400> 5643

Lys Val Gly Gly Asn Lys Met Ser Lys Phe Ile Glu Pro Ser Asn Glu
 1 5 10 15
 Glu Ile Lys Leu Glu Lys Leu Tyr Gln Asp Ile Gly Leu Ser Asp Lys
 20 25 30
 Glu Tyr Asp Lys Val Val Glu Ile Leu Gly Arg Glu Pro Asn Phe Thr
 35 40 45
 Glu Val Gly Ile Phe Ser Val Met Trp Ser Glu His Cys Ser Tyr Lys
 50 55 60
 His Ser Lys Pro Phe Leu Lys Gln Phe Pro Thr Thr Gly Glu His Val
 65 70 75 80

Lys Val Leu Gln Thr Pro Val Val Ser Gly Asn Val Ser Leu Tyr Asn
 530 535 540
 Glu Thr Arg Gly Thr Ser Ile Phe Pro Thr Pro Val Val Gly Met Val
 545 550 555 560
 Gly Leu Ile Glu Asp Val Ser Tyr Leu Lys Glu Phe Lys Pro Lys Ala
 565 570 575
 Gly Asp Lys Ile Tyr Leu Val Gly Glu Thr Arg Asp Asp Phe Gly Gly
 580 585 590
 Ser Gln Leu Glu Lys Leu Leu Tyr Gly Ser Val Asn His Glu Phe Glu
 595 600 605
 Ser Ile Asp Leu Ser Asp Glu Val Ser Lys Gly Lys Leu Ile Lys Gln
 610 615 620
 Ala Ile Arg Asn Gly Ile Ala Ser His Val Gln Thr Val Gly Lys Gly
 625 630 635 640
 Gly Leu Leu Val Thr Leu Ala Lys Ile Ser Ala His Tyr Asp Leu Gly
 645 650 655
 Met Gln Ala Gln Leu Asp Val Thr Asn Ala Gln Leu Phe Ser Glu Thr
 660 665 670
 Gln Gly Arg Tyr Ile Val Val Val Lys Glu Gly Gln Thr Leu Asp Ile
 675 680 685
 Asp Gln Ala Gln Glu Ile Gly His Leu Thr His Gln Gln Leu Phe Asp
 690 695 700
 Ile Ser Asn Ser Asp Val Lys Ile Lys Glu Asn Val Ser Asp Ile Lys
 705 710 715 720
 Gln Lys Trp Glu Gly Ala Ile Val Gln Cys Leu Thr Thr Gln Asp
 725 730 735

<210> 5644

<211> 48

<212> PRT

<213> S.epidermidis

<400> 5644

Asp Lys Thr Gly Lys Asn Thr Val Ile Ser Arg Ile Tyr Asn Gln Met
 1 5 10 15
 Ile Lys Arg Val Arg Lys Trp Trp Ile Gly Gly Gly Thr Glu His Ile
 20 25 30
 Tyr Pro Lys Ile Ile His Asn Leu Lys Trp Ile Pro Asn Ser Phe Leu
 35 40 45

<210> 5645

<211> 62

<212> PRT

<213> S.epidermidis

<400> 5645

Ile Asn Lys Gly Val Leu Ile Phe Arg Lys Asn Leu Arg Lys Tyr Ala
 1 5 10 15
 Asn Leu Ser Lys Glu Cys Thr Val Ile Gly Val Ser Asn Arg Ile Glu
 20 25 30
 Ile Trp Asp Arg Glu Thr Trp Asn Asp Phe Tyr Asp Glu Ser Glu Glu
 35 40 45
 Ser Phe Glu Asp Ile Ala Glu Asp Leu Ile Asp Phe Asp Phe
 50 55 60

<210> 5646

<211> 419
 <212> PRT
 <213> S.epidermidis

<400> 5646

Lys	Glu	Arg	Gly	Asn	Leu	Leu	Lys	Val	Leu	Ile	Val	Gly	Ala	Gly	Gly	1	5	10	15
Arg	Glu	His	Thr	Leu	Ala	Ser	Lys	Ile	Asn	Gln	Ser	Pro	Ile	Val	Asp	20	25	30	
Lys	Val	Tyr	Ala	Ile	Pro	Gly	Asn	Asp	Ala	Met	Val	Asn	Ile	Ala	Glu	35	40	45	
Val	His	Ser	Glu	Ile	Ala	Glu	Ser	Asp	His	Gln	Ala	Ile	Leu	His	Phe	50	55	60	
Ala	Gln	His	Asn	Ala	Ile	Asp	Trp	Val	Ile	Ile	Gly	Pro	Glu	Gln	Pro	65	70	75	80
Leu	Ile	Asp	Gly	Leu	Ala	Asp	Leu	Leu	Arg	Asn	Ala	Asn	Ile	Lys	Val	85	90	95	
Phe	Gly	Pro	Gly	Gln	Asp	Ala	Ala	Gln	Ile	Glu	Gly	Ser	Lys	Leu	Phe	100	105	110	
Ala	Lys	Gln	Leu	Met	Asp	Lys	Tyr	Arg	Ile	Pro	Thr	Ala	Glu	Tyr	Lys	115	120	125	
Glu	Val	Ser	Ser	Arg	Asn	Glu	Ala	Leu	Gln	Tyr	Val	Glu	Thr	Cys	Asp	130	135	140	
Leu	Pro	Ile	Val	Ile	Lys	Lys	Asp	Gly	Leu	Ala	Ala	Gly	Lys	Gly	Val	145	150	155	160
Ile	Ile	Ala	Phe	Thr	Arg	Glu	Asp	Ala	Leu	Glu	Gly	Val	Lys	Lys	Ile	165	170	175	
Tyr	Gln	Glu	Glu	Lys	Gly	Lys	Val	Val	Phe	Glu	Ser	Tyr	Leu	Glu	Gly	180	185	190	
Glu	Glu	Phe	Ser	Leu	Met	Thr	Phe	Val	Asn	Gly	Asp	Tyr	Ala	Val	Pro	195	200	205	
Phe	Asp	Cys	Ile	Ala	Gln	Asp	His	Lys	Arg	Ala	Phe	Asp	Asn	Asp	Gln	210	215	220	
Gly	Pro	Asn	Thr	Gly	Gly	Met	Gly	Ala	Tyr	Cys	Pro	Val	Pro	His	Ile	225	230	235	240
Asp	Ala	Ser	Val	Leu	Glu	Gln	Thr	Asn	Lys	Glu	Ile	Ala	Gln	Pro	Ile	245	250	255	
Ala	Lys	Ala	Met	Ala	Gln	Glu	Gly	His	Asp	Phe	Phe	Gly	Leu	Leu	Tyr	260	265	270	
Ile	Gly	Ala	Ile	Leu	Thr	Lys	Asp	Gly	Pro	Lys	Val	Ile	Glu	Phe	Asn	275	280	285	
Ala	Arg	Phe	Gly	Asp	Pro	Glu	Ala	Gln	Val	Leu	Leu	Thr	Arg	Leu	Glu	290	295	300	
Ser	Asp	Leu	Met	Gln	Leu	Ile	Ile	Asp	Leu	Glu	Asn	Cys	Gln	Pro	Ile	305	310	315	320
His	Phe	Asn	Trp	Lys	Asp	Glu	Ala	Val	Val	Gly	Val	Met	Leu	Ala	Ser	325	330	335	
Lys	Gly	Tyr	Pro	Gly	Ser	Tyr	Glu	Lys	Gly	His	Glu	Ile	Ser	Gly	Phe	340	345	350	
Asn	Leu	Asp	Ser	His	Tyr	Tyr	Val	Ser	Gly	Leu	Lys	Lys	Glu	Gly	Gln	355	360	365	
Cys	Phe	Val	Asn	Ser	Gly	Gly	Arg	Val	Ile	Leu	Ala	Ile	Gly	Glu	Gly	370	375	380	
Pro	Thr	Val	Glu	Lys	Ala	Gln	Ala	Asn	Ala	Tyr	Glu	His	Ala	Arg	Gln	385	390	395	400
Ile	Lys	Ser	Asp	Asn	Leu	Phe	Tyr	Arg	Asn	Asp	Ile	Gly	Asn	Lys	Ala				

Ile Thr Lys 405 410 415

<210> 5647
 <211> 73
 <212> PRT
 <213> S.epidermidis

<400> 5647
 Cys Val Phe Ile Phe Ile Lys Gly Gly Thr Phe Met Gly Lys Gln Cys
 1 5 10 15
 Phe Val Thr Gly Arg Lys Ala Ser Thr Gly Asn His Arg Ser His Ala
 20 25 30
 Leu Asn Ala Asn Lys Arg Arg Trp Asn Ala Asn Leu Gln Lys Val Arg
 35 40 45
 Ile Leu Val Asp Gly Lys Pro Lys Lys Val Trp Val Ser Ala Arg Ala
 50 55 60
 Leu Lys Ser Gly Lys Val Thr Arg Val
 65 70

<210> 5648
 <211> 391
 <212> PRT
 <213> S.epidermidis

<400> 5648
 Thr Lys Ile Ile Gly Lys Pro Tyr Ile Cys Ser Ile Arg Arg Ser Lys
 1 5 10 15
 Lys Val Ser Lys Phe Lys Ser Leu Leu Leu Phe Gly Thr Leu Ile
 20 25 30
 Leu Leu Ser Gly Cys Ser Asn Ile Glu Val Phe Asn Ala Lys Gly Pro
 35 40 45
 Val Ala Ser Ser Gln Lys Phe Leu Ile Ile Tyr Ser Ile Ile Phe Met
 50 55 60
 Leu Val Ile Val Ala Val Val Leu Ser Met Phe Ala Ile Phe Ile Phe
 65 70 75 80
 Lys Tyr Ser Tyr Lys Lys Asn Ser Glu Ser Gly Lys Met His His Asn
 85 90 95
 Ser Leu Ile Glu Thr Ile Trp Phe Val Val Pro Ile Leu Ile Val Ile
 100 105 110
 Ala Leu Ala Ile Pro Thr Val Lys Thr Leu Tyr Asp Tyr Glu Lys Pro
 115 120 125
 Pro Glu Lys Asp Lys Asp Pro Leu Val Val Tyr Ala Val Ser Ala Gly
 130 135 140
 Tyr Lys Trp Phe Phe Ala Tyr Pro Asp Gln His Ile Glu Thr Val Asn
 145 150 155 160
 Thr Leu Thr Ile Pro Lys Asp Arg Pro Val Val Phe Lys Leu Gln Ser
 165 170 175
 Met Asp Thr Met Thr Ser Phe Trp Ile Pro Gln Leu Gly Gly Gln Lys
 180 185 190
 Tyr Ala Met Thr Gly Met Thr Met Asn Trp Thr Leu Thr Ala Asp Gln
 195 200 205
 Leu Gly Thr Phe Arg Gly Arg Asn Ser Asn Phe Asn Gly Glu Gly Phe
 210 215 220
 Ser Arg Gln Thr Phe Lys Val His Ser Val Ser Gln Asn Asp Phe Asp

225 230 235 240
 Lys Trp Val Lys Glu Ala Lys Gly Lys Lys Thr Leu Ser Gln Asp Thr
 245 250 255
 Phe Asp Lys Gln Leu Leu Pro Ser Thr Ser Asn Lys Glu Leu Thr Phe
 260 265 270
 Ser Gly Thr His Met Ala Phe Val Asp Pro Ala Ala Asp Pro Glu Tyr
 275 280 285
 Ile Phe Tyr Ala Tyr Lys Arg Tyr Asn Phe Glu Gln Lys Asp Pro Asn
 290 295 300
 Phe Thr Ala Glu Glu Asp Leu Tyr Lys Asp Val Lys Asp Lys Pro Ile
 305 310 315 320
 Lys Pro Ala Arg Lys Val His Ile Thr Asn Pro Asn Tyr Glu Arg His
 325 330 335
 Gly Met Lys Pro Met Ile Leu Gly Asn Asn Glu Lys Tyr Asp Asn Glu
 340 345 350
 Phe Lys Lys Glu Glu Asp His Asn Ser Lys Glu Met Glu Lys Ile Ser
 355 360 365
 Lys Gly Ala Lys Asp Glu Asn Ala Ser Lys Leu His Lys Lys Glu His
 370 375 380
 Asp Asp His Gly Gly Gly His
 385 390

<210> 5649
 <211> 42
 <212> PRT
 <213> S.epidermidis

<400> 5649
 Pro Lys Val Ile Arg Leu Ser Gln Tyr Ile Gly Asp Leu Ile Pro Glu
 1 5 10 15
 Leu Gln Val Asn Lys Ser Phe Gly Asp Asn Glu Thr Ala Ser Met Ser
 20 25 30
 Asn Asn Ala Leu Ala Ile Phe Leu Ala Ile
 35 40

<210> 5650
 <211> 44
 <212> PRT
 <213> S.epidermidis

<400> 5650
 Ala Gly Ile Phe Ala Phe Val Ile Asn Met Tyr Lys Ser Val Pro Ile
 1 5 10 15
 Pro Asp Ala Asn Lys Ala Ala Asp Ile Gly Arg Cys Val Lys Asn Gly
 20 25 30
 Thr Ser Thr Val Asp Pro Asn Ile Ala Asn Lys Cys
 35 40

<210> 5651
 <211> 58
 <212> PRT
 <213> S.epidermidis

<400> 5651
 Gly Lys Ser Ile His Phe Ala Cys Ala Ile Gly Ala Asn Leu Thr Met
 1 5 10 15

Pro Met Lys Met Asp Thr Ile Tyr Pro Thr Ile Ile Pro Ile Ser Thr
 20 25 30
 Gly Ile Ser Asp Lys Asn Pro Leu Lys Asn Pro Trp Thr Met Met Val
 35 40 45
 Thr Ala Asn Val Ile Lys Ala Thr Ile Lys
 50 55

<210> 5652

<211> 361

<212> PRT

<213> S.epidermidis

<400> 5652

Arg Asp Tyr Ile Arg Arg Asn Ser Val Met Thr Gln Asn Asp Leu Met
 1 5 10 15
 Ser Glu Leu Lys Gln Gln Ala Leu Val Asp Ile Asn Glu Ala Lys Asp
 20 25 30
 Ala Gln Ala Leu Gln Glu Val Lys Val Lys Tyr Leu Gly Lys Lys Gly
 35 40 45
 Ser Val Ser Gly Leu Met Lys Asn Met Lys Asp Leu Pro Asn Glu Asp
 50 55 60
 Lys Pro Ala Tyr Gly Gln Lys Val Asn Glu Leu Arg Gln Thr Ile Gln
 65 70 75 80
 Ser Glu Leu Asp Glu Arg Gln Lys Leu Ile Lys Glu Glu Lys Leu Asn
 85 90 95
 Gln Gln Leu Ser Glu Glu Thr Ile Asp Val Thr Leu Pro Ser Arg His
 100 105 110
 Ile Glu Ile Gly Ser Lys His Pro Leu Thr Arg Thr Val Glu Glu Ile
 115 120 125
 Glu Asp Leu Phe Leu Gly Leu Gly Tyr Glu Ile Val Asp Gly Tyr Glu
 130 135 140
 Val Glu Gln Asp Tyr Tyr Asn Phe Glu Ala Leu Asn Leu Pro Lys Ser
 145 150 155 160
 His Pro Ala Arg Asp Met Gln Asp Ser Phe Tyr Ile Thr Glu Glu Ile
 165 170 175
 Leu Met Arg Thr His Thr Ser Pro Val Gln Ala Arg Thr Met Glu Lys
 180 185 190
 Arg Lys Gly Gln Gly Pro Val Lys Ile Ile Cys Pro Gly Lys Val Tyr
 195 200 205
 Arg Arg Asp Ser Asp Asp Ala Thr His Ser His Gln Phe Thr Gln Ile
 210 215 220
 Glu Gly Leu Val Val Asp Lys Asp Ile Lys Met Ser Asp Leu Lys Gly
 225 230 235 240
 Thr Leu Glu Leu Val Ala Lys Lys Leu Phe Gly Ala Asp Arg Glu Ile
 245 250 255
 Arg Leu Arg Pro Ser Tyr Phe Pro Phe Thr Glu Pro Ser Val Glu Val
 260 265 270
 Asp Val Ser Cys Phe Lys Cys Lys Gly Gln Gly Cys Asn Val Cys Lys
 275 280 285
 His Thr Gly Trp Ile Glu Ile Leu Gly Ala Gly Met Val His Pro Asn
 290 295 300
 Val Leu Glu Met Ala Gly Phe Asp Ser Lys Glu Tyr Ser Gly Phe Ala
 305 310 315 320
 Phe Gly Met Gly Pro Asp Arg Ile Ala Met Leu Lys Tyr Gly Ile Glu
 325 330 335
 Asp Ile Arg His Phe Tyr Thr Asn Asp Val Arg Phe Leu Asp Gln Phe

```
<210> 5653
<211> 84
<212> PRT
<213> S.epidermidis
```

```
<210> 5654
<211> 41
<212> PRT
<213> S.epidermidis
```

```
<210> 5655
<211> 442
<212> PRT
<213> S.epidermidis
```

<400> 5655															
Thr	Ile	Phe	Ile	Tyr	Asn	Asn	Phe	Glu	Val	Asn	Ser	Met	Ser	Phe	Leu
1				5					10					15	
Arg	Lys	His	Thr	Glu	Ile	Ile	Phe	Ser	Tyr	Ile	Ile	Gly	Ile	Val	Ser
			20					25					30		
Leu	Phe	Thr	Gly	Leu	Ile	Ile	Phe	Ile	Asn	Leu	Pro	Leu	Ile	Lys	Gln
		35					40					45			
Phe	Lys	Gly	Asp	Lys	Lys	Val	Asp	Thr	His	Val	His	Asn	Val	Trp	Glu
	50					55				60					
Phe	Leu	Asn	Ala	Phe	Phe	Ala	Glu	Ile	Ile	Lys	Val	Met	Ser	Lys	Phe
65					70					75				80	
Ile	Gly	Gly	Phe	Pro	Ile	Thr	Ser	Ala	Ile	Val	Ile	Ile	Val	Phe	Gly
				85					90					95	
Ile	Leu	Val	Met	Leu	Leu	Gly	His	Thr	Leu	Phe	Arg	Thr	Ile	Lys	Tyr
			100					105					110		

```

Asp Tyr Asp Ile Ser Ile Phe Phe Leu Val Ile Gly Ile Met Tyr Phe
    115                120                125
Ile Ile Thr Leu Leu Leu Met Thr Gln Val Tyr Gly Phe Phe Ala Ile
    130                135                140
Val Phe Ile Ile Pro Phe Thr Val His Ile Gly Tyr Ile Val Tyr Lys
145                150                155                160
Asp Glu Leu Asn Gln Asp Asn Arg Lys Asn His Tyr Met Trp Ile Ile
    165                170                175
Val Thr Tyr Gly Met Ser Tyr Leu Ile Thr Gln Ile Ser Leu Tyr Gly
    180                185                190
Arg Ile Asp Ala Asn Glu Ile Glu Ser Ile Asp Ile Leu Ser Val Asn
    195                200                205
Thr Phe Phe Ile Ile Met Trp Leu Leu Gly Gln Met Ala Ile Trp Asn
    210                215                220
Phe Leu Phe Leu Arg Arg Ser Leu Pro Leu Thr Lys Glu Glu Leu Gly
225                230                235                240
Glu Glu Glu Pro Glu Leu Ser Arg Thr Asn Lys Gly Asn Val Ser Asn
    245                250                255
Gln Thr Lys Val His Leu Lys Gln Leu Gln Asn Lys Thr Thr Glu Tyr
    260                265                270
Ala Arg Lys Thr Arg Arg Ser Val Asp Leu Asp Lys Ile Arg Ala Lys
    275                280                285
Arg Asp Lys Phe Lys Gln Lys Ile Asn Ser Ile Val Asp Ile Gln Glu
    290                295                300
Asp Asp Ile Pro Asn Trp Met Lys Lys Pro Lys Trp Val Lys Pro Met
305                310                315                320
Tyr Val Gln Leu Phe Cys Gly Val Ile Ile Leu Phe Phe Ala Phe Leu
    325                330                335
Glu Phe Asn Asn Arg Asn Ala Leu Phe Leu Thr Gly Glu Trp Glu Leu
    340                345                350
Ser Gln Thr Gln Tyr Val Val Glu Trp Val Thr Leu Leu Leu Leu
    355                360                365
Phe Ile Ile Ile Ile Tyr Ile Ala Thr Thr Leu Thr Tyr Tyr Leu Arg
    370                375                380
Asp Lys Tyr Tyr Tyr Leu Gln Leu Phe Met Gly Ser Ile Leu Phe Phe
385                390                395                400
Lys Phe Leu Thr Glu Phe Ile Asn Ile Met Val His Gly Leu Leu Leu
    405                410                415
Ser Ile Phe Ile Thr Pro Ile Leu Leu Leu Met Leu Ile Ala Met Ile
    420                425                430
Val Ala Tyr Ser Leu Gln Leu Arg Glu Lys
    435                440

```

<210> 5656

<211> 101

<212> PRT

<213> S.epidermidis

<400> 5656

```

Lys Met Phe Met Gly Glu Phe Asp His Gln Leu Asp Thr Lys Gly Arg
1                5                10                15
Met Ile Ile Pro Ser Lys Phe Arg Tyr Asp Leu Asn Glu Arg Phe Ile
    20                25                30
Ile Thr Arg Gly Leu Asp Lys Cys Leu Phe Gly Tyr Thr Leu Glu Glu
    35                40                45
Trp Gln Gln Ile Glu Glu Lys Met Lys Thr Leu Pro Met Thr Lys Lys

```

50 55 60
 Asp Ala Arg Lys Phe Met Arg Met Phe Ser Ser Gly Ala Val Glu Val
 65 70 75 80
 Glu Leu Asp Lys Gln Gly Arg Ile Asn Ile Pro Gln Lys Phe Lys Glu
 85 90 95
 Ile Cys Gln Phe Lys
 100

<210> 5657
 <211> 47
 <212> PRT
 <213> S.epidermidis

<400> 5657
 Val Lys Ile Ile Leu Ile Asn Val Lys Lys Leu Ser Ile Thr Tyr Arg
 1 5 10 15
 Ser Val Ile Ile Val Ser Arg Cys Lys Ile Tyr Met Leu Lys Thr Ile
 20 25 30
 Leu Asn Glu Leu Asn Leu Ala Ile Gly Phe Gly Lys Val Lys Leu
 35 40 45

<210> 5658
 <211> 571
 <212> PRT
 <213> S.epidermidis

<400> 5658
 Asp Asn Tyr Ile Gln Arg Arg Asp Tyr Ile Met Lys Lys Ser Ser Lys
 1 5 10 15
 Phe Ser Lys Asp Phe Pro Thr Arg Lys Asn His Tyr Ala Ile Arg Lys
 20 25 30
 Phe Thr Val Gly Thr Ala Ser Ile Val Gly Ser Phe Leu Phe Phe
 35 40 45
 Gly Gln Thr Gln Ala His Ala Glu Gln Ala Glu Glu Phe Glu Arg Val
 50 55 60
 Thr Thr Gly Thr Val Asp Thr Gly Gly Gln Pro Ala Arg Ala Asp Gln
 65 70 75 80
 Gly Gln Glu Gly Pro Gln Ala Gly Ala Asp Thr His Asn Thr Ala Ser
 85 90 95
 Gln Pro Gly Val Thr Gly Gln Asp Ala Pro Asn Glu Asn His Ala Gly
 100 105 110
 Asp Gln Asn Ala Ala Val Thr His Pro Ala Asn Gln Glu Asn Asn Ala
 115 120 125
 Pro Gln Val Gly Ala Gly Thr Pro Gly Ala Glu Asn Thr Pro Gln Ala
 130 135 140
 Gly Gly Glu Asn His Asn Gln Asp Thr Ala Val Thr Ser Ala Gly Thr
 145 150 155 160
 Asn Gly Glu Gln Asn Gly Gly Lys Pro Ala Thr Ser Thr Thr Gly Gln
 165 170 175
 Asp Ala Ala Gln Ser Asn Gly Pro Gln Gly Thr Ser Val Ala Gln Pro
 180 185 190
 Gly Asn Asp Ala Ser Ser Gln Gly His Asp Thr Pro Gln Ala Asp Ala
 195 200 205
 Gly Thr His Asn Thr Glu Gly Gln Pro Ala Val Thr Thr Gly Glu Gln
 210 215 220
 Thr Gly Gly Lys Pro Ala Ala Thr Lys Pro Glu Gly Ala Ser Ala Glu

225					230				235				240				
Thr	Ala	Pro	Ala	Pro	Asn	Asn	Ala	Asp	Glu	Asn	His	Ala	Gln	Pro	Ser		
				245					250					255			
Pro	Gln	Thr	Gly	Gly	Thr	Thr	Ala	Thr	Gln	Ala	Gly	Gln	Val	Lys	Pro		
				260					265					270			
Ser	Gly	Asp	Ser	Thr	Pro	Thr	Gly	Glu	Pro	Asn	Lys	Ala	Asp	Asp	Gln		
				275					280					285			
Asp	Thr	Gln	Ile	Lys	Pro	Thr	Ser	Asn	Gln	Gly	Thr	Thr	Ala	Thr	Thr		
				290					295					300			
Asn	Glu	Ile	Gly	Asn	Gln	Lys	Pro	Ser	Gly	Gln	Thr	Gly	Asn	Thr	Glu		
305					310					315					320		
Asn	Thr	Pro	Asn	Asp	Gly	Thr	Gln	Val	Lys	Pro	Asn	Asn	Asp	Pro	Ala		
				325					330					335			
Val	Thr	Gly	Thr	Pro	Asn	Thr	Asn	Gly	Glu	Gln	Thr	Gly	Gln	Pro	Asn		
				340					345					350			
Ala	Thr	Val	Thr	Pro	Gly	Gln	Gly	Asn	Glu	Glu	Ile	Asn	Gly	Ala	Ser		
				355					360					365			
Lys	Pro	Gly	Glu	Val	Ser	Pro	Lys	Pro	Glu	Glu	Asn	Asn	Pro	Thr	Ala		
				370					375					380			
Thr	Glu	Pro	Gly	Thr	Thr	Ala	Pro	Gly	Asn	Thr	Asn	Gln	Asp	Thr	Gln		
385					390					395					400		
Val	Lys	Pro	Asn	Thr	Asp	Gln	Thr	Ala	Thr	Gly	Thr	Pro	Ala	Gly	Thr		
				405					410					415			
Asp	Asn	Gln	Asn	Thr	Gln	Gln	Gly	Asn	Thr	Glu	Gln	Asn	Asn	Gln	Asn		
				420					425					430			
Ala	Gln	Pro	Ser	Ala	Pro	Gly	Thr	Thr	Asp	Gln	Ala	Gly	Ala	Thr	Val		
				435					440					445			
Lys	Pro	Gly	Ser	Ala	Pro	Asn	Gln	Asp	Thr	Glu	Ala	Thr	Pro	Asn	Pro		
				450					455					460			
Asp	Gln	Asn	Asn	Thr	Pro	Thr	Asn	Gly	Gln	Asp	Gly	Asp	Gln	Thr	Asn		
465					470					475					480		
Gln	Ser	Thr	Gln	Asp	Asp	Asn	Asp	Asn	Gln	Asn	Thr	Gln	Gln	Gly	Asn		
				485					490					495			
Thr	Lys	Gln	Asn	Asn	Gln	Asn	Ala	Glu	Gln	Gly	Asn	Thr	Gly	Gly	Thr		
				500					505					510			
Asp	Lys	Asp	Ala	Lys	Val	Asn	Thr	Asn	Asp	Asp	Glu	Thr	Lys	Thr	Asp		
				515					520					525			
Val	Lys	Asn	Asp	Thr	Glu	Leu	Pro	Glu	Thr	Gly	Leu	Ser	Asn	Glu	Tyr		
				530					535					540			
Asp	Tyr	Thr	Thr	Thr	Val	Phe	Gly	Ser	Ile	Ala	Leu	Ile	Ser	Ser	Leu		
545					550					555					560		
Leu	Leu	Leu	Arg	Arg	Gln	Arg	Lys	Glu	Ser	Lys							
				565					570								

```
<210> 5659
<211> 136
<212> PRT
<213> S.epidermidis
```

<400> 5659
His Met Asp Ile Pro Lys Ile Thr Thr Phe Leu Met Phe Asn Asp Glu
1 5 10 15
Ala Glu Glu Ala Ile Gln Leu Tyr Thr Ser Leu Phe Glu Asp Ser Glu
20 25 30
Ile Ile Thr Met Val Lys Tyr Gly Glu Glu Gly Pro Gly Thr Pro Gly
35 40 45

Ser Val Gln His Ser Ile Phe Thr Leu Asn Gly Gln Val Phe Met Ala
 50 55 60
 Ile Asp Ala Asn Ser Gly Glu Glu Leu Pro Met Asn Pro Ala Met Ser
 65 70 75 80
 Leu Tyr Val Thr Val Lys Asp Thr Met Glu Met Glu Arg Leu Phe Asn
 85 90 95
 Gly Leu Lys Asn Glu Gly Ala Ile Leu Met Pro Lys Thr Glu Met Pro
 100 105 110
 Pro Phe Arg Glu Phe Ala Trp Val Gln Asp Lys Phe Gly Val Ser Phe
 115 120 125
 Gln Leu Ala Leu Pro Glu Asn Lys
 130 135

<210> 5660

<211> 785

<212> PRT

<213> S.epidermidis

<400> 5660

Arg Asp Cys Met Arg Gln Lys Thr Leu Asp Val Leu Glu Phe Glu Lys
 1 5 10 15
 Ile Lys Ser Phe Val Ala Asp Glu Thr Ile Ser Asp Leu Gly Arg Glu
 20 25 30
 Lys Val Gln Glu Met Ala Pro Ala Ser Asn Phe Asp Thr Val Glu Phe
 35 40 45
 Gln Met Asn Glu Thr Asp Glu Ile Ser Gln Ile Tyr Asn Lys His Arg
 50 55 60
 Leu Pro Ser Leu Ser Gly Leu Ala Lys Val Ser Pro Leu Val His Arg
 65 70 75 80
 Ala Ser Ile Gly Gly Val Leu Asn Val Gly Glu Leu Asn Arg Ile Lys
 85 90 95
 Arg Leu Val Gln Val Gln Asn Gln Phe Lys Thr Phe Tyr Asn Gln Met
 100 105 110
 Leu Glu Glu Asp Glu Glu Val Lys Tyr Pro Ile Leu His Asp Lys Met
 115 120 125
 Asn His Leu Pro Ile Leu Thr Asp Leu Phe Lys Glu Ile Asn Glu Lys
 130 135 140
 Cys Asp Ala His Asp Leu Phe Asp His Ala Ser Tyr Thr Leu Gln Ser
 145 150 155 160
 Ile Arg Ser Lys Ile Ser Arg Thr Asn Gln Arg Ile Arg Gln Asn Leu
 165 170 175
 Asp Arg Ile Val Lys Asn Gln Gly Asn Gln Lys Lys Leu Ser Asp Ala
 180 185 190
 Ile Val Thr Val Arg Asn Asp Arg Asn Val Ile Pro Val Lys Ala Glu
 195 200 205
 Tyr Arg Gln Asp Phe Asn Gly Ile Val His Asp Gln Ser Ala Ser Gly
 210 215 220
 Gln Thr Leu Tyr Ile Glu Pro Asn Ser Val Val Glu Met Asn Asn Gln
 225 230 235 240
 Ile Ser Arg Leu Arg Asn Asp Glu Ala Val Glu Arg Glu Arg Ile Leu
 245 250 255
 Thr Glu Leu Thr Gly Leu Val Ser Ala Glu Ser Asp Ala Leu Leu Val
 260 265 270
 Ala Glu Ser Val Met Gly Gln Ile Asp Phe Leu Ile Ala Lys Ala Arg
 275 280 285
 Tyr Ala Arg Thr Ile Lys Gly Thr Lys Pro Thr Phe Lys Glu Asp Arg

290		295		300
Thr Ile Tyr Leu Pro Asn Ala Phe His Pro Leu Leu Asp Lys Asp Thr				
305		310		315
Val Val Ala Asn Thr Ile Glu Phe Ile Asp Asp Val Glu Thr Val Ile				
		325		330
Ile Thr Gly Pro Asn Thr Gly Gly Lys Thr Val Thr Leu Lys Thr Leu				
		340		345
Gly Leu Ile Ile Val Met Ala Gln Ser Gly Leu Leu Ile Pro Thr Leu				
		355		360
Asp Gly Ser Gln Leu Ser Ile Phe Glu Asn Val Tyr Cys Asp Ile Gly				
		370		375
Asp Glu Gln Ser Ile Glu Gln Ser Leu Ser Thr Phe Ser Ser His Met				
385		390		395
Lys Asn Ile Val Glu Ile Leu Gln Asp Ala Asp Gln Asn Ser Leu Ile				
		405		410
Leu Phe Asp Glu Leu Gly Ala Gly Thr Asp Pro Ser Glu Gly Ala Ala				
		420		425
Leu Ala Met Ser Ile Leu Asp Tyr Val Arg Arg Leu Gly Ser Leu Val				
		435		440
Met Ala Thr Thr His Tyr Pro Glu Leu Lys Ala Tyr Ser Tyr Asn Arg				
		450		455
Glu Gly Val Met Asn Ala Asn Val Glu Phe Asp Val Asp Thr Leu Ser				
465		470		475
Pro Thr Tyr Lys Leu Leu Met Gly Val Pro Gly Arg Ser Asn Ala Phe				
		485		490
Asp Ile Ser Lys Lys Leu Gly Leu Ser Leu Asn Ile Ile Asn Lys Ala				
		500		505
Lys Thr Met Ile Gly Thr Asp Glu Gln Glu Ile Asn Ala Met Ile Glu				
		515		520
Ser Leu Glu His Asn Ser Lys Arg Val Asp Gln Gln Arg Ile Glu Leu				
		530		535
Asp Arg Leu Val Arg Glu Ala Gln Glu Thr His Asp Ala Leu Ser Lys				
545		550		555
Gln Tyr Gln Gln Tyr Gln Asn Tyr Glu Lys Ser Leu Met Glu Glu Ala				
		565		570
Lys Glu Lys Ala Asn Gln Arg Val Lys Ser Ala Thr Lys Glu Ala Asp				
		580		585
Glu Ile Leu Lys Glu Leu Arg Asn Leu Arg Asp His Lys Gly Ala Glu				
		595		600
Val Lys Glu His Glu Leu Ile Asp Lys Lys Lys Gln Leu Asp Asp Gln				
		610		615
Tyr Glu Ala Lys Ser Ile Lys Gln His Val Gln Lys Lys Lys Tyr Asp				
625		630		635
Thr Ile His Ala Gly Asp Glu Val Lys Val Leu Ser Tyr Gly Gln Lys				
		645		650
Gly Glu Val Leu Glu Leu Val Gly Asn Glu Glu Ala Val Val Gln Met				
		660		665
Gly Ile Ile Lys Met Lys Leu Pro Ile Glu Asp Leu Glu Lys Thr Lys				
		675		680
Lys Lys Lys Glu Lys Pro Thr Lys Met Val Thr Arg Gln Asn Arg Gln				
		690		695
Thr Ile Lys Thr Glu Leu Asp Leu Arg Gly Tyr Arg Tyr Glu Glu Ala				
705		710		715
Leu Asn Glu Leu Asp Gln Tyr Leu Asp Gln Ala Val Leu Ser Asn Tyr				
		725		730
Glu Gln Val Tyr Ile Ile His Gly Lys Gly Thr Gly Ala Leu Gln Lys				

			740					745					750				
Gly	Val	Gln	Gln	His	Leu	Lys	Lys	His	Lys	Ser	Val	Arg	Gln	Phe	Arg		
		755					760					765					
Gly	Gly	Met	Pro	Ser	Glu	Gly	Gly	Phe	Gly	Val	Thr	Val	Ala	Glu	Leu		
	770					775					780						

Lys
785

<210> 5661

<211> 61

<212> PRT

<213> S.epidermidis

<400> 5661

Gly	Gly	Leu	Ile	Met	Ala	Val	Pro	Lys	Arg	Arg	Thr	Ser	Lys	Thr	Arg		
1			5					10					15				
Lys	Asn	Lys	Arg	Arg	Thr	His	Phe	Lys	Ile	Ser	Val	Pro	Gly	Met	Thr		
		20					25					30					
Glu	Cys	Pro	Asn	Cys	Gly	Glu	Tyr	Lys	Leu	Ser	His	Arg	Val	Cys	Lys		
	35					40					45						
Asn	Cys	Gly	Ser	Tyr	Asn	Gly	Glu	Glu	Val	Val	Ser	Lys					
	50				55						60						

<210> 5662

<211> 1211

<212> PRT

<213> S.epidermidis

<400> 5662

Phe	Leu	Ile	Ile	Val	Asn	Ile	Ala	Pro	Ser	Leu	Ser	Thr	Gln	His	Asp		
1			5					10					15				
Cys	Asp	Lys	Glu	Asn	Thr	Met	Val	Tyr	Leu	Lys	Ser	Ile	Asp	Ala	Ile		
		20					25					30					
Gly	Phe	Lys	Ser	Phe	Ala	Asp	His	Thr	Asn	Val	Gln	Phe	Asp	Lys	Gly		
	35					40					45						
Val	Thr	Ala	Ile	Val	Gly	Pro	Asn	Gly	Ser	Gly	Lys	Ser	Asn	Ile	Thr		
	50				55					60							
Asp	Ala	Ile	Lys	Trp	Val	Leu	Gly	Glu	Gln	Ser	Ala	Lys	Ser	Leu	Arg		
65				70				75						80			
Gly	Ala	Lys	Met	Glu	Asp	Ile	Ile	Phe	Ser	Gly	Ala	Glu	His	Arg	Lys		
		85					90					95					
Ala	Gln	Asn	Phe	Ala	Glu	Val	Lys	Leu	Lys	Leu	Asp	Asn	His	Ser	Gln		
		100					105					110					
Lys	Leu	Gln	Ile	Asp	Ser	Glu	Glu	Leu	Val	Val	Thr	Arg	Arg	Leu	Tyr		
	115					120						125					
Arg	Ser	Gly	Glu	Ser	Glu	Tyr	Tyr	Leu	Asn	Asn	Asp	Arg	Ala	Arg	Leu		
	130				135						140						
Lys	Asp	Ile	Ile	Asp	Leu	Phe	Leu	Asp	Ser	Gly	Leu	Gly	Lys	Glu	Ala		
145				150						155				160			
Phe	Ser	Ile	Ile	Ser	Gln	Gly	Arg	Val	Asp	Glu	Ile	Leu	Asn	Ala	Lys		
		165					170						175				
Pro	Ile	Asn	Arg	Arg	Gln	Ile	Ile	Glu	Glu	Ser	Ala	Gly	Val	Leu	Lys		
		180					185					190					
Tyr	Lys	Lys	Arg	Lys	Ala	Glu	Ser	Ile	Gln	Lys	Leu	Asp	His	Thr	Glu		
	195					200						205					
Asp	Asn	Leu	Asn	Arg	Val	Glu	Asp	Ile	Leu	Tyr	Asp	Leu	Glu	Gly	Arg		

210		215		220	
Val Glu Pro Leu Lys	Glu Glu Ala Ala Ile Ala Lys Glu Tyr Lys Gln				
225		230		235	240
Leu Ser Lys Glu Met	Glu Gln Ser Asp Val Ile Val Thr Val Ser Asp				
	245		250		255
Ile Asp His Tyr Thr	Glu Asp Asn Gln Arg Leu Asp Glu Arg Leu Asn				
	260		265		270
His Leu Lys Ser Gln	Gln Ala Glu Lys Glu Gly Gln Gln Ala Gln Ile				
	275		280		285
Asn Gln Leu Leu Gln	Lys Tyr Lys Gly Lys Arg Gln Gln Asn Asp Tyr				
	290		295		300
Asp Ile Glu Lys Leu	Asn Tyr Glu Leu Val Lys Ala Thr Glu Asn Tyr				
305		310		315	320
Glu Gln Leu Ser Gly	Lys Leu Asn Val Leu Glu Glu Arg Lys Lys Asn				
	325		330		335
Gln Ser Glu Thr Asn	Ala Arg Tyr Glu Glu Glu Leu Asp Asn Leu Glu				
	340		345		350
Ser Gln Ile Asp Ser	Ile Lys Asn Glu Lys Ala Gln Asn Glu Lys Leu				
	355		360		365
Leu Ala Asp Leu Lys	Asn Lys Gln Lys Gln Leu Asn Lys Glu Val Gln				
	370		375		380
Glu Leu Glu Ser Leu	Leu Tyr Ile Ser Asp Glu Gln His Asp Glu Lys				
385		390		395	400
Leu Glu Glu Ile Lys	Asn Ser Tyr Tyr Thr Leu Met Ser Glu Gln Ser				
	405		410		415
Val Val Asn Asn Asp	Ile Arg Phe Leu Glu His Thr Ile Asn Glu Asn				
	420		425		430
Glu Ala Lys Lys Ser	Arg Leu Asp Ser Arg Leu Val Glu Ala Phe Asn				
	435		440		445
Gln Leu Lys Asp Ile	Gln Gln Asn Ile Thr Gln Thr Gln Lys Glu Tyr				
	450		455		460
Gln Ser Ser Lys Lys	Ser Met Glu Lys Val Glu Gln Asn Ile Gln Gln				
465		470		475	480
Leu Glu Gln Gln Leu	Thr Asp Ser Lys Arg Leu Leu Ser Glu Tyr Glu				
	485		490		495
Asn Lys Leu Tyr Gln	Ala Tyr Arg Tyr Asn Glu Lys Leu Lys Ser Arg				
	500		505		510
Ile Asp Ser Leu Ala	Thr Gln Glu Glu Asp Tyr Thr Tyr Phe Phe Asn				
	515		520		525
Gly Val Lys His Ile	Leu Lys Ala Lys Asp Lys Glu Leu Arg Gly Ile				
	530		535		540
His Gly Ala Val Ala	Glu Val Ile Asn Val Pro Ser Glu Met Thr Gln				
545		550		555	560
Ala Ile Glu Thr Ala	Leu Gly Ala Ser Leu Gln His Val Ile Val Asp				
	565		570		575
Asn Glu Lys Asp Gly	Arg Gln Ala Ile Gln Tyr Leu Lys Gln Arg Gly				
	580		585		590
Leu Gly Arg Ala Thr	Phe Leu Pro Leu Asn Val Ile Gln Pro Arg His				
	595		600		605
Val Ala Ala Asp Ile	Lys Asp Val Ala Arg Gly Ser Gln Gly Phe Ile				
	610		615		620
Asn Ile Ala Ser Asp	Ala Ile Asn Val Ser Ala Lys Tyr Gln Asn Ile				
625		630		635	640
Ile Glu Asn Leu Leu	Gly Asn Thr Ile Ile Val Glu Asn Leu Lys His				
	645		650		655
Ala Asn Glu Leu Ala	Arg Ala Ile Arg Tyr Arg Thr Arg Ile Val Thr				

			660					665				670					
Leu	Glu	Gly	Asp	Val	Val	Asn	Pro	Gly	Gly	Ser	Met	Thr	Gly	Gly	Gly		
		675					680					685					
Ala	Arg	Lys	Thr	Lys	Ser	Ile	Leu	Ser	Gln	Lys	Asp	Glu	Leu	Ser	Thr		
		690				695					700						
Met	Arg	Asn	Gln	Leu	Glu	Asp	Tyr	Gln	Arg	Gln	Thr	Ala	Glu	Phe	Glu		
705					710					715					720		
Arg	Gln	Phe	Lys	Glu	Gln	Lys	Thr	Gln	Ala	Glu	Gln	Leu	Ser	Glu	Gln		
			725					730						735			
Tyr	Phe	Ser	Ala	Ser	Gln	Gln	Tyr	Asn	Asn	Leu	Lys	Glu	Gln	Val	His		
		740					745						750				
His	His	Glu	Leu	Glu	Leu	Asp	Arg	Leu	Lys	Thr	Gln	Glu	Ala	His	Leu		
		755					760					765					
Lys	Asn	Glu	His	Glu	Glu	Phe	Glu	Phe	Glu	Lys	Asn	Asp	Gly	Tyr	Gln		
	770					775					780						
Ser	Asp	Lys	Ser	Lys	Glu	Thr	Leu	Lys	Glu	Lys	Gln	Asn	His	Leu	Ile		
785					790					795					800		
Glu	Ile	Gln	Gln	Gln	Leu	Lys	Gln	Leu	Glu	Ser	Asp	Ile	Glu	Arg	Tyr		
			805						810					815			
Thr	Gln	Leu	Ser	Lys	Glu	Gly	Lys	Ala	Ser	Thr	His	Gln	Thr	Gln	Gln		
			820					825					830				
Gln	Leu	His	Gln	Lys	Gln	Ser	Asp	Leu	Ala	Val	Val	Lys	Glu	Arg	Ile		
		835					840					845					
Lys	Ser	Gln	Lys	Gln	Val	Tyr	Glu	Arg	Leu	Asp	Lys	Gln	Leu	Ser	Asp		
	850					855					860						
Ser	Glu	Arg	Gln	Lys	Ile	Glu	Val	Asn	Glu	Lys	Ile	Lys	Leu	Phe	Asn		
865					870					875					880		
Ser	Asp	Glu	Met	Met	Gly	Lys	Asp	Ala	Phe	Glu	Lys	Leu	Lys	Glu	Gln		
			885					890						895			
Ile	Gln	Gln	Gln	Glu	Asn	Val	Arg	Gln	Asn	Leu	Asn	Gln	Gln	Leu	Ser		
			900					905					910				
Glu	Ile	Lys	Gln	Gln	Arg	Lys	Asp	Leu	Asn	Glu	Lys	Ile	Glu	Ile	Asn		
		915					920					925					
Glu	Ser	Gln	Leu	Gln	Lys	Cys	His	Gln	Asp	Ile	Leu	Ser	Ile	Glu	Asn		
	930					935					940						
His	Tyr	Gln	Asp	Ile	Lys	Ala	Lys	Gln	Ser	Lys	Leu	Asp	Val	Leu	Ile		
945					950					955					960		
Asn	His	Ala	Ile	Asp	His	Leu	Asn	Asp	Thr	Tyr	Gln	Leu	Thr	Val	Glu		
			965						970					975			
Arg	Ala	Arg	Met	Glu	Tyr	Asp	Ser	Asp	Glu	Thr	Ile	Asp	Asn	Leu	Arg		
			980					985					990				
Lys	Lys	Val	Lys	Leu	Thr	Lys	Met	Ser	Ile	Asp	Glu	Leu	Gly	Pro	Val		
		995					1000					1005					
Asn	Leu	Asn	Ala	Ile	Glu	Gln	Phe	Glu	Glu	Leu	Asn	Glu	Arg	Tyr	Thr		
	1010					1015						1020					
Phe	Leu	Asn	Glu	Gln	Arg	Thr	Asp	Leu	Arg	Glu	Ala	Lys	Glu	Thr	Leu		
1025					1030					1035					1040		
Glu	Gln	Ile	Ile	His	Glu	Met	Asp	Lys	Glu	Val	Glu	Gly	Arg	Phe	Lys		
			1045						1050					1055			
Thr	Thr	Phe	His	Ala	Val	Gln	Asp	His	Phe	Thr	Thr	Val	Phe	Lys	Gln		
			1060					1065					1070				
Leu	Phe	Gly	Gly	Gly	Gln	Ala	Glu	Leu	Arg	Leu	Thr	Glu	Asp	Asp	Tyr		
		1075					1080					1085					
Leu	Ser	Ala	Gly	Val	Asp	Ile	Ile	Val	Gln	Pro	Pro	Gly	Lys	Lys	Leu		
	1090					1095					1100						
Gln	His	Leu	Ser	Leu	Leu	Ser	Gly	Gly	Glu	Arg	Ala	Leu	Ser	Ala	Ile		

1105		1110		1115		1120
Ala Leu Leu Phe	Ala Ile Leu Lys Val	Arg Ser Ala Pro	Phe Val Ile			
	1125	1130	1135			
Leu Asp Glu Val	Glu Ala Ala Leu Asp	Glu Ala Asn Val	Ile Arg Tyr			
	1140	1145	1150			
Ala Gln Tyr Leu	Asn Glu Leu Ser Thr	Glu Thr Gln Phe	Ile Val Ile			
	1155	1160	1165			
Thr His Arg Lys	Gly Thr Met Glu Phe	Ser Asp Arg Leu	Tyr Gly Val			
	1170	1175	1180			
Thr Met Gln Glu	Ser Gly Val Ser Lys	Leu Val Ser Val	Asn Leu Asn			
	1185	1190	1195	1200		
Thr Ile Asp Glu	Val Met Lys Glu Glu	Gln Ala				
	1205	1210				

<210> 5663

<211> 778

<212> PRT

<213> S.epidermidis

<400> 5663

Cys Val Ile Met	Ala Lys Arg Lys	Ile Lys Ile Lys	Lys Lys Asn Lys	Ile
1	5	10	15	
Gly Ala Val Leu	Leu Val Gly Leu	Phe Gly Leu Leu	Phe Phe Ile Leu	
	20	25	30	
Val Leu Arg Phe	Ser Tyr Val Met	Ile Thr Gly His	Ser Asn Gly Gln	
	35	40	45	
Asp Leu Ile Met	Lys Ala Asn Glu	Lys Tyr Leu Val	Lys Asn Ser Gln	
	50	55	60	
Gln Pro Glu Arg	Gly Lys Ile Tyr	Asp Arg Asn Gly	Lys Val Leu Ala	
	65	70	75	80
Glu Asp Val Glu	Arg Tyr Lys Leu	Val Ala Val Val	Asp Lys Lys Ala	
	85	90	95	
Ser Lys Glu Ser	Lys Lys Pro Arg	His Val Val Asp	Lys Lys Lys Thr	
	100	105	110	
Ala Lys Lys Leu	Ala Glu Ile Ile	Asp Met Asp Ala	Asp Glu Ile Glu	
	115	120	125	
Lys Arg Leu Asn	Asn Lys Lys Ala	Phe Gln Ile Glu	Phe Gly Gln Lys	
	130	135	140	
Gly Thr Asn Leu	Thr Tyr Gln Glu	Lys Glu Lys Ile	Glu Lys Met Lys	
	145	150	155	160
Leu Pro Gly Ile	Ala Leu Tyr Pro	Glu Thr Glu Arg	Phe Tyr Pro Asn	
	165	170	175	
Gly Asn Phe Ala	Ser His Leu Ile	Gly Met Ala Gln	Lys Asp Pro Asp	
	180	185	190	
Thr Gly Glu Leu	Asn Gly Ala Leu	Gly Val Glu Lys	Ile Phe Asn Ser	
	195	200	205	
Tyr Leu Asn Gly	Ser Arg Gly Ala	Leu Lys Tyr Ile	His Asp Ile Trp	
	210	215	220	
Gly Tyr Ile Ala	Pro Asn Thr Lys	Lys Glu Gln Pro	Lys Arg Gly	
	225	230	235	240
Asp Asp Val His	Leu Thr Ile Asp	Ser Asn Ile Gln	Val Phe Val Glu	
	245	250	255	
Glu Ala Leu Asp	Asp Met Val Glu	Arg Tyr Ala Pro	Lys Asp Leu Phe	
	260	265	270	
Ala Val Val Met	Asp Ala Lys Thr	Gly Glu Ile Leu	Ala Tyr Ser Gln	
	275	280	285	

Arg Pro Thr Phe Asn Pro Glu Thr Gly Lys Asp Phe Gly Lys Lys Trp
 290 295 300
 Ala Asn Asp Leu Tyr Gln Asn Thr Tyr Glu Pro Gly Ser Thr Phe Lys
 305 310 315 320
 Thr Tyr Gly Leu Ala Ala Ala Ile Gln Glu Gly Lys Phe Lys Pro Asp
 325 330 335
 Glu Lys Tyr Lys Ser Gly His Arg Asn Ile Met Gly Ser Glu Ile Ser
 340 345 350
 Asp Trp Asn Lys Thr Gly Trp Gly Arg Ile Pro Met Ser Leu Gly Phe
 355 360 365
 Thr Tyr Ser Ser Asn Thr Leu Met Met His Leu Gln Asp Leu Val Gly
 370 375 380
 Ala Asp Lys Met Lys Ser Trp Tyr Glu Arg Phe Gly Phe Gly Lys Lys
 385 390 395 400
 Thr Gly Gly Met Phe Asp Gly Glu Ala Ala Gly Asn Ile Gly Trp Ala
 405 410 415
 Asn Glu Leu Gln Gln Lys Thr Ser Ala Phe Gly Gln Ser Thr Thr Val
 420 425 430
 Thr Pro Ala Gln Met Ile Gln Ala Gln Ser Ala Phe Phe Asn Lys Gly
 435 440 445
 Asn Met Leu Lys Pro Trp Phe Val Ser Ser Ile Asp Asn Pro Ile Thr
 450 455 460
 Lys Lys Asn Tyr Tyr Ser Gly Lys Lys Glu Phe Ala Gly Lys Pro Val
 465 470 475 480
 Thr Glu Glu Thr Ala Asn Lys Val Glu Glu Glu Leu Asp Lys Val Val
 485 490 495
 Asn Ser Lys Lys Ser His Ala Met Asn Tyr Arg Val Lys Gly Tyr Asp
 500 505 510
 Ile Glu Gly Lys Thr Gly Thr Ala Gln Val Ala Asp Ser Asn Gly Gly
 515 520 525
 Gly Tyr Val Lys Gly Glu Asn Pro Tyr Phe Val Ser Phe Ile Gly Asp
 530 535 540
 Ala Pro Lys Lys Lys Pro Lys Val Ile Val Tyr Ala Gly Met Ser Leu
 545 550 555 560
 Ala Gln Lys Asn Asp Gln Glu Ala Tyr Glu Met Gly Val Ser Lys Ala
 565 570 575
 Phe Lys Pro Ile Met Glu Asn Thr Leu Lys Tyr Leu Asn Val Gly Lys
 580 585 590
 Ser Ser Asp Thr Ser Ser Lys Thr Asp Phe Ser Lys Val Pro Asn Val
 595 600 605
 Gln Gly Asp Glu Val Gln Lys Ala Glu Asp Ser Val Asn Ala Gln Ser
 610 615 620
 Leu Lys Pro Ile Thr Ile Gly Asn Gly Lys Gln Ile Lys Gln Gln Ser
 625 630 635 640
 Val Lys Ser Gly Thr Lys Val Leu Pro His Ser Lys Val Met Leu Met
 645 650 655
 Thr Asp Gly Glu Leu Thr Met Pro Asp Met Thr Gly Trp Thr Lys Glu
 660 665 670
 Asp Val Leu Ala Phe Glu Asp Leu Thr Lys Ile Lys Val Ser Thr Lys
 675 680 685
 Gly Asn Gly Phe Val Thr Asn Gln Ser Ile Ser Lys Gly Gln Ile Ile
 690 695 700
 Lys Asn Lys Asp Lys Ile Glu Val Ser Leu Ser Ala Glu Asp Thr Asp
 705 710 715 720
 Asp Asp Gln Glu Lys Thr Asp Glu Asp Ser Ser Asp Asn Lys Ser Lys
 725 730 735

Lys Asp Lys Ala Asp Glu Asp His Ser Asn Thr Ser Ser Ser Thr Lys
 740 745 750
 Asn Asp Lys Ser Asn Ala Asp Ser Lys Asn Asp Ser Asp Asp Ser Thr
 755 760 765
 Asn Glu Thr Ser Gly Ser Glu Arg Asn Asn
 770 775

<210> 5664

<211> 281

<212> PRT

<213> S.epidermidis

<400> 5664

Tyr Val Val Ile Gly Asp Asp Thr Met Ala Leu Tyr Asp Phe Ala Lys
 1 5 10 15
 Gly Leu Ile Leu Glu Ala Gly Asn Lys Val Arg Leu Met Met Gln Glu
 20 25 30
 Glu Leu Asp Ile Lys Thr Lys Ser Asn Pro Asn Asp Leu Val Thr Asn
 35 40 45
 Val Asp Lys Ala Thr Glu Asn Tyr Leu Tyr Glu Thr Ile Leu His Asn
 50 55 60
 Tyr Pro Asp His Gln Val Ile Gly Glu Glu Gly His Gly His Asn Leu
 65 70 75 80
 Glu Tyr Leu Lys Gly Val Ile Trp Val Ile Asp Pro Ile Asp Gly Thr
 85 90 95
 Leu Asn Phe Val His Gln Lys Glu Asn Phe Ala Ile Ser Ile Gly Ile
 100 105 110
 Tyr His Asp Gly Lys Pro Tyr Ala Gly Phe Val Tyr Asp Val Met Lys
 115 120 125
 Asp Val Leu Tyr His Ala Lys Val Gly Gln Gly Ala Phe Glu Asn Thr
 130 135 140
 His Lys Leu Glu Met Ile Gln Asn Thr Glu Leu Lys Arg Ser Ile Ile
 145 150 155 160
 Gly Ile Asn Pro Asn Trp Leu Ser Lys Pro Ile Leu Ser Asp Ile Phe
 165 170 175
 Ser Ser Ile Val Asn Glu Ala Arg Ser Ala Arg Ala Tyr Gly Ser Ala
 180 185 190
 Ala Leu Glu Ile Ile Ser Val Ala Lys Gly Gln Leu Ala Ala Tyr Leu
 195 200 205
 Thr Pro Arg Leu Gln Pro Trp Asp Phe Ala Gly Gly Leu Leu Ile Leu
 210 215 220
 Asn Glu Val Gly Gly Ile Gly Thr Asn Leu Leu Gly Asp Lys Leu Asp
 225 230 235 240
 Phe Asn Gln Pro Asn Ser Ile Leu Ile Ala Asn Pro Ser Leu His Arg
 245 250 255
 Glu Ile Leu Asn His His Leu Asn Gln Gln Arg Asp Thr Leu Ile Thr
 260 265 270
 Leu His Glu Lys Arg Phe Gly Lys Arg
 275 280

<210> 5665

<211> 805

<212> PRT

<213> S.epidermidis

<400> 5665

Val	Ala	Val	Met	Ile	Ala	Lys	Val	Ile	Val	Asp	Ile	Pro	Ser	Lys	Ser
1				5					10					15	
Val	Asp	Phe	Lys	Phe	Asp	Tyr	Ile	Val	Pro	Lys	Asn	Leu	Glu	Arg	Val
			20					25					30		
Ile	Gln	Ile	Gly	Val	Arg	Val	Val	Val	Pro	Phe	Gly	Pro	Arg	Thr	Ile
		35					40					45			
Gln	Gly	Tyr	Val	Met	Asn	Ile	Gln	Gln	Glu	Pro	Asp	Gly	Asn	Met	Asp
	50					55					60				
Ile	Ser	Lys	Leu	Lys	Glu	Ile	Lys	Glu	Val	Arg	Asp	Ile	Lys	Pro	Glu
65					70					75					80
Leu	Thr	Ser	Glu	Leu	Ile	Gln	Leu	Ser	Glu	Trp	Met	Ser	His	Tyr	His
				85					90					95	
Val	Met	Lys	Arg	Ile	Ser	Val	Leu	Glu	Ala	Met	Leu	Pro	Ser	Ala	Ile
			100					105						110	
Lys	Ala	Lys	Tyr	Lys	Lys	Ala	Phe	Ser	Ile	Ile	Asp	Pro	Lys	Asn	Leu
		115					120					125			
Ser	Ser	Lys	Thr	Lys	Ala	Leu	Phe	Asn	Asn	Asp	Gly	Tyr	Tyr	Leu	Tyr
	130					135					140				
Lys	Glu	Ala	Gln	Gln	Asn	Asn	Asp	Leu	Glu	Glu	Met	Leu	Thr	Leu	Leu
145					150					155					160
Asn	Gln	Gly	Leu	Ile	Glu	Glu	Val	Thr	Ile	Leu	Ser	Gln	Asn	Thr	Lys
				165					170					175	
Lys	Lys	Thr	Gln	Lys	Ala	Val	Gly	Val	Val	Asn	Thr	Leu	Asn	Gly	Asp
			180					185						190	
Glu	Val	Leu	Ala	Lys	Leu	Glu	Lys	Tyr	Thr	Lys	Gln	Tyr	Asp	Leu	Tyr
		195					200					205			
Ala	Phe	Leu	Leu	Glu	Glu	Ser	His	Arg	Thr	Val	Phe	Leu	Lys	Glu	Ile
	210					215					220				
Asn	Asp	Met	Gly	Phe	Ser	His	Ser	Ser	Leu	Asp	Ser	Leu	Ile	Lys	Lys
225					230					235					240
Gly	Tyr	Ile	Glu	Lys	Tyr	Thr	Ala	Glu	Val	Phe	Arg	Asp	Pro	Tyr	Ala
				245					250					255	
Asn	Arg	Ile	Phe	Glu	Gln	Glu	Gln	Lys	Arg	Ile	Leu	Thr	Lys	Glu	Gln
			260					265						270	
Gln	Asp	Ala	Phe	Glu	Ala	Ile	Gln	His	Tyr	Ile	His	Asp	Glu	Lys	Glu
		275					280					285			
Arg	Thr	Phe	Leu	Leu	His	Gly	Val	Thr	Gly	Ser	Gly	Lys	Thr	Glu	Val
		290				295					300				
Tyr	Leu	Gln	Thr	Ile	Glu	Glu	Val	Leu	Asn	Lys	Gly	Lys	Glu	Ala	Met
305					310					315					320
Met	Leu	Val	Pro	Glu	Ile	Ala	Leu	Thr	Pro	Gln	Met	Val	Leu	Arg	Phe
				325					330					335	
Lys	Arg	Arg	Phe	Gly	Asp	Asp	Val	Ala	Val	Leu	His	Ser	Gly	Leu	Ser
			340					345					350		
Lys	Gly	Glu	Arg	Tyr	Asp	Glu	Trp	Gln	Lys	Ile	Arg	Asp	Gly	Arg	Ala
		355					360					365			
Arg	Val	Ser	Val	Gly	Ala	Arg	Ser	Ser	Ile	Phe	Ala	Pro	Phe	Lys	Asn
		370				375					380				
Leu	Gly	Ile	Ile	Ile	Ile	Asp	Glu	Glu	His	Glu	Ser	Thr	Tyr	Lys	Gln
385					390					395					400
Glu	Asp	Tyr	Pro	Arg	Tyr	His	Ala	Arg	Asp	Ile	Ala	Gln	Trp	Arg	Ser
				405					410					415	
Gln	Phe	His	His	Cys	Pro	Val	Val	Leu	Gly	Ser	Ala	Thr	Pro	Ser	Leu
			420					425					430		
Glu	Ser	Tyr	Ala	Arg	Ala	Glu	Lys	Asn	Val	Tyr	Glu	Leu	Leu	Ser	Leu
		435					440					445			

Pro His Arg Val Asn Gln Gln Ala Leu Pro His Ile Asp Ile Ile Asp
 450 455 460
 Met Arg Glu Glu Leu Ser Glu Gly Asn Arg Ser Met Phe Ser Ile Ala
 465 470 475 480
 Leu Arg Gln Ala Ile Gln Glu Arg Leu Asp Lys Lys Glu Gln Ile Val
 485 490 495
 Leu Phe Leu Asn Arg Arg Gly Tyr Ala Ser Phe Met Leu Cys Arg Asp
 500 505 510
 Cys Gly Tyr Val Pro Gln Cys Pro His Cys Asp Ile Ser Leu Thr Tyr
 515 520 525
 His Lys Thr Thr Asp Gln Leu Lys Cys His Tyr Cys Gly Tyr Gln Glu
 530 535 540
 Asn Pro Pro Ser Gln Cys Pro Asn Cys Glu Gly Asp His Ile Arg Gln
 545 550 555 560
 Val Gly Thr Gly Thr Gln Arg Val Glu Glu Leu Leu Gln Gln Glu Phe
 565 570 575
 Pro His Ala Arg Ile Ile Arg Met Asp Val Asp Thr Thr Ser Arg Lys
 580 585 590
 Gly Ala His Glu Lys Leu Leu Asn Asp Phe Glu Ala Gly Lys Gly Asp
 595 600 605
 Ile Leu Leu Gly Thr Gln Met Ile Ala Lys Gly Leu Asp Tyr Pro Asn
 610 615 620
 Ile Thr Leu Val Gly Val Leu Asn Ala Asp Thr Met Leu Asn Leu Pro
 625 630 635 640
 Asp Phe Arg Ala Ser Glu Arg Thr Tyr Gln Leu Leu Thr Gln Val Ser
 645 650 655
 Gly Arg Ala Gly Arg His Glu Lys Glu Gly Gln Val Ile Ile Gln Thr
 660 665 670
 Tyr Asn Pro Asp His Tyr Ser Ile Lys Asp Val Lys Leu Asn Asp Tyr
 675 680 685
 Leu Ser Phe Tyr Gln Lys Glu Met Asn Tyr Arg Lys Leu Gly Lys Tyr
 690 695 700
 Pro Pro Tyr Tyr Phe Leu Ile Asn Phe Thr Ile Ser His Thr Asp Ile
 705 710 715 720
 Lys Lys Val Met Met Ala Ser Lys His Ile His Gln Ile Leu Val Gln
 725 730 735
 His Leu Ser Glu Lys Ala Phe Val Leu Gly Pro Ser Pro Ala Ala Leu
 740 745 750
 Ala Arg Ile Asn Asn Glu Tyr Arg Phe Gln Ile Leu Val Lys Tyr Lys
 755 760 765
 Ser Glu Pro Gln Leu His Pro Ala Leu Gln Tyr Leu Asp Asp Tyr Tyr
 770 775 780
 His Asp Gln Tyr Val Lys Asp Lys Leu Ser Leu Lys Ile Asp Ile Asn
 785 790 795 800
 Pro Gln Met Met Met
 805

<210> 5666

<211> 44

<212> PRT

<213> S.epidermidis

<400> 5666

Asn Pro Ser Ile Glu Tyr Leu Thr Ile Arg Tyr Pro Ile Glu Gly Phe
 1 5 10 15
 Phe Asp Trp Met Ile Lys Arg Trp Gln Pro Ile Ser Tyr Ile Glu Leu

```

<400> 5670
Met Ile Lys Ile Tyr Leu Phe Val Asp Leu Ile Lys His Ile Ala Thr
1           5           10           15
Lys Lys Arg Ser Tyr Leu Leu Tyr Thr Ser Thr Tyr Leu Leu Asn Lys

```


Tyr Lys Gln Ile Asp Leu Pro Leu Lys Pro Met Ile
 20 25 30
 35 40

<210> 5671
 <211> 214
 <212> PRT
 <213> S.epidermidis

<400> 5671
 Met Val Lys Ile Leu Pro Ser Leu Leu Ser Ile Asp Phe Leu Asn Leu
 1 5 10 15
 Lys Glu Glu Leu Gln Leu Leu Glu Thr Ala Lys Val Asp Gly Leu His
 20 25 30
 Phe Asp Val Met Asp Gly Lys Phe Val Pro Asn Ile Ser Ile Gly Ile
 35 40 45
 Pro Ile Leu Asp Ala Val Arg Gln Gln Ser His Leu Pro Ile Asp Val
 50 55 60
 His Leu Met Ile Glu Gln Pro Glu Asn Tyr Ile Asn Leu Phe Ala Glu
 65 70 75 80
 His Gly Ala Asp Met Ile Ser Val His Val Glu Ser Thr Thr His Ile
 85 90 95
 His Arg Ala Ile Glu Gln Ile Lys Gln Leu Gly Lys Lys Ala Gly Val
 100 105 110
 Val Ile Asn Pro Gly Thr Ser Val Glu Thr Ile Leu Pro Ile Leu Ser
 115 120 125
 Ile Val Asp Tyr Val Leu Val Met Thr Val Asn Pro Gly Phe Gly Gly
 130 135 140
 Gln Thr Phe Ile Glu Gln Cys Val Thr Lys Ile Glu Gln Leu Asn Gln
 145 150 155 160
 Leu Lys His Glu Asn His Leu Thr Phe Asp Ile Glu Val Asp Gly Gly
 165 170 175
 Ile Asn Asp Gln Thr Ser Lys Arg Cys Val Glu Gln Gly Ala Thr Met
 180 185 190
 Leu Val Thr Gly Ser Tyr Phe Phe Lys Gln Glu Asp Tyr Ala Lys Val
 195 200 205
 Thr Ser Leu Leu Lys Glu
 210

<210> 5672
 <211> 210
 <212> PRT
 <213> S.epidermidis

<400> 5672
 Ser Asn Lys Ile Phe Glu Tyr Leu Leu Met Tyr Leu Cys Leu Ser Tyr
 1 5 10 15
 Leu Ile Tyr Tyr Leu Ile Arg Lys Val Tyr Asp Met Ile Thr Met Lys
 20 25 30
 Asp Ile Ile Arg Asp Gly His Pro Thr Leu Arg Glu Lys Ala Lys Glu
 35 40 45
 Leu Ser Phe Pro Leu Ser Asn Asn Asp Lys Glu Thr Leu Arg Ala Met
 50 55 60
 Arg Glu Phe Leu Ile Asn Ser Gln Asp Glu Glu Thr Ala Lys Arg Tyr
 65 70 75 80
 Gly Leu Arg Ser Gly Val Gly Leu Ala Ala Pro Gln Ile Asn Glu Pro

				85					90					95			
Lys	Arg	Met	Ile	Ala	Val	Tyr	Leu	Pro	Asp	Asp	Gly	Asn	Gly	Lys	Ser		
			100					105					110				
Tyr	Asp	Tyr	Met	Leu	Val	Asn	Pro	Lys	Ile	Met	Ser	Tyr	Ser	Val	Gln		
		115						120					125				
Glu	Ala	Tyr	Leu	Pro	Thr	Gly	Glu	Gly	Cys	Leu	Ser	Val	Asp	Glu	Asn		
		130						135					140				
Ile	Pro	Gly	Leu	Val	His	Arg	His	His	Arg	Val	Thr	Ile	Lys	Ala	Gln		
145					150						155				160		
Asp	Ile	Asp	Gly	Asn	Asp	Val	Lys	Leu	Arg	Leu	Lys	Gly	Tyr	Pro	Ala		
				165					170						175		
Ile	Val	Phe	Gln	His	Glu	Ile	Asp	His	Leu	Asn	Gly	Ile	Met	Phe	Tyr		
			180					185						190			
Asp	Tyr	Ile	Asp	Ala	Asn	Glu	Pro	Leu	Lys	Pro	His	Glu	Glu	Ala	Val		
		195					200							205			
Glu	Val																
	210																

<210> 5673

<211> 311

<212> PRT

<213> S.epidermidis

<400> 5673

Val	Ser	Lys	Met	Gly	Lys	Ile	Ala	Val	Val	Phe	Pro	Gly	Gln	Gly	Ala		
1			5						10					15			
Gln	Lys	Val	Gly	Met	Ala	Ser	Asp	Leu	Tyr	Asn	Glu	Glu	Glu	Arg	Ser		
		20						25					30				
Thr	Arg	Val	Leu	Asn	Leu	Ala	Gln	Glu	Thr	Val	Asp	Phe	Asp	Leu	Leu		
		35					40					45					
Glu	Thr	Met	Phe	Thr	Asp	Asn	Asp	Gly	Lys	Leu	Gly	Glu	Thr	Glu	Asn		
	50					55					60						
Thr	Gln	Pro	Ala	Leu	Leu	Thr	His	Ser	Val	Ala	Leu	Leu	Glu	Ser	Leu		
65				70						75					80		
Asn	His	Leu	Lys	Val	Asp	Tyr	Thr	Met	Gly	His	Ser	Leu	Gly	Glu	Tyr		
			85					90						95			
Ser	Ser	Leu	Val	Ser	Ser	Asp	Val	Leu	Ser	Phe	Glu	Asp	Ala	Val	Arg		
		100						105					110				
Ile	Val	Arg	Lys	Arg	Gly	Gln	Leu	Met	Ala	Gln	Ala	Phe	Pro	Asn	Gly		
		115					120					125					
Val	Gly	Gly	Met	Ala	Ala	Val	Leu	Gly	Leu	Asp	Tyr	Asp	Asp	Val	Asp		
	130					135					140						
Lys	Ile	Cys	Gln	Thr	Leu	Ser	Thr	Lys	Glu	Gln	Leu	Ile	Glu	Pro	Ala		
145					150					155					160		
Asn	Ile	Asn	Ser	Pro	Gly	Gln	Ile	Val	Val	Ser	Gly	His	Lys	Ser	Leu		
			165						170					175			
Ile	Asp	Glu	Leu	Val	Glu	Lys	Gly	Lys	Glu	Leu	Gly	Ala	Lys	Arg	Val		
		180					185							190			
Leu	Pro	Leu	Ala	Val	Ser	Gly	Pro	Phe	His	Ser	Ser	Met	Met	Lys	Val		
	195					200						205					
Ile	Glu	Glu	Asp	Phe	Ala	Asn	Phe	Ile	Asn	Gln	Phe	Glu	Trp	His	Asn		
	210					215					220						
Ala	Asn	Tyr	Pro	Val	Val	Gln	Asn	Val	Asn	Ala	Lys	Gly	Glu	Thr	Asp		
225				230						235					240		
Ala	Glu	Val	Ile	Lys	Arg	Asn	Met	Val	Lys	Gln	Leu	Tyr	Ser	Pro	Val		
			245						250					255			

Gln Phe Ile Gln Ser Thr Glu Trp Leu Ile Asn Gln Gly Val Asp His
 260 265 270
 Phe Ile Glu Ile Gly Pro Gly Lys Val Leu Ser Gly Leu Ile Lys Lys
 275 280 285
 Ile Asn Arg Asp Val Lys Ile Thr Ser Ile Gln Thr Leu Glu Asp Val
 290 295 300
 Lys Gly Trp Asn Asn His Glu
 305 310

<210> 5674

<211> 382

<212> PRT

<213> S.epidermidis

<400> 5674

Lys Gly Glu Met Gln Met Lys Ser Val Gly Leu Ile Thr Glu Tyr Asn
 1 5 10 15
 Pro Phe His Asn Gly His Leu Phe His Ala Thr Leu Ser Lys Gln Arg
 20 25 30
 Ser Glu Thr Asn Val Thr Ile Ala Ile Met Ser Gly Asn Phe Val Met
 35 40 45
 Arg Gly Glu Pro Ala Ile Tyr His Lys Phe Lys Arg Thr Lys Met Ala
 50 55 60
 Leu Ser Ala Val Asp Leu Val Val Glu Leu Pro Leu Ile Gly Ser Leu
 65 70 75 80
 Ser Ser Ser Asp Thr Phe Ala Glu Ile Ala Ile Lys Thr Ala Gln Tyr
 85 90 95
 Leu Asp Ile Asp Ile Ile Ser Phe Gly Ser Glu Ser Ala Ser Leu Lys
 100 105 110
 Asp Leu Gln Tyr Leu Ala Thr Gln Met Ile Asp Tyr Glu Lys His Pro
 115 120 125
 Asp Phe Lys Glu Lys Leu Lys Gln Gly Lys Ser Tyr Pro Arg Ile Leu
 130 135 140
 Ser Glu Leu Thr His Asn Asp Thr Leu Leu Gln Ser Pro Asn Asn Ile
 145 150 155 160
 Leu Gly Ile Ser Tyr Leu Lys Ala Met Gln Gln Phe Ala Pro His Met
 165 170 175
 Ser Ala Leu Thr Ile Lys Arg Glu Gly Ser Leu His His Gln Lys Val
 180 185 190
 Ile Asp His His His Phe Ala Ser Gly Thr Ser Ile Arg Arg Ser Leu
 195 200 205
 Met Asn Asp Asn Val Asp Trp Lys Asn Val Val Pro Asn Gln Ile Gln
 210 215 220
 Ser Leu Tyr Cys Lys Pro His Thr Thr Val Glu Asp Thr Phe Pro Phe
 225 230 235 240
 Ile Lys His Gln Leu Ile Thr Gln Pro Lys Glu Ser Leu His Ser Ile
 245 250 255
 Tyr Thr Ile Asn Glu Gly Phe Glu Asn Arg Leu Gln Thr Met Ile His
 260 265 270
 Arg Ser Asp Ser Phe Glu Ser Leu Leu Ser Asn Leu Lys Thr Lys Arg
 275 280 285
 Tyr Thr Gln Thr Tyr Ile Gln Arg Val Leu Met Asn Val Leu Leu Asn
 290 295 300
 Ile Thr Lys Asp Asp Val Asn Lys Glu Ile Asn Ala Val Arg Val Leu
 305 310 315 320
 Gly Met Ser Glu Lys Gly Arg Ser Tyr Leu Lys Tyr Leu Lys Ala Asn

				325					330					335			
Tyr	Pro	Asn	Arg	His	Tyr	Ile	Thr	Asn	Val	Asn	Gln	Lys	Thr	Ala	His		
			340					345					350				
Tyr	Phe	Lys	Asn	Glu	Ile	Lys	Ala	Thr	His	Val	Tyr	Asn	Leu	Leu	Ser		
		355					360					365					
Asn	Gln	Ser	Gln	Thr	Asp	Phe	Asn	Thr	Pro	Leu	Val	Arg	Ile				
	370					375					380						

<210> 5675

<211> 249

<212> PRT

<213> S.epidermidis

<400> 5675

Lys	Asp	Gly	Ile	Ile	Met	Asn	Lys	Ser	Ala	Leu	Val	Thr	Gly	Ala	Ser		
1				5					10					15			
Arg	Gly	Ile	Gly	Arg	Ser	Ile	Ala	Leu	Gln	Leu	Ala	Glu	Glu	Gly	Tyr		
			20					25					30				
Asn	Val	Ala	Val	Asn	Tyr	Ala	Gly	Ser	Lys	Asp	Lys	Ala	Glu	Ala	Val		
		35					40					45					
Val	Glu	Glu	Ile	Lys	Ala	Lys	Gly	Val	Glu	Ser	Phe	Ala	Ile	Gln	Ala		
	50					55					60						
Asn	Val	Ala	Lys	Gly	Asp	Glu	Val	Lys	Glu	Met	Ile	Lys	Glu	Val	Val		
65					70				75						80		
Ser	Gln	Phe	Gly	Ser	Val	Asp	Val	Leu	Val	Asn	Asn	Ala	Gly	Ile	Thr		
				85				90					95				
Lys	Asp	Asn	Leu	Leu	Met	Arg	Met	Lys	Glu	Gln	Glu	Trp	Asp	Asp	Val		
		100						105					110				
Ile	Asp	Thr	Asn	Leu	Lys	Gly	Val	Phe	Asn	Cys	Ile	Gln	Lys	Val	Thr		
		115					120					125					
Pro	Gln	Met	Leu	Arg	Gln	Arg	Ser	Gly	Ala	Ile	Ile	Asn	Leu	Thr	Ser		
		130				135					140						
Ile	Val	Gly	Ala	Met	Gly	Asn	Pro	Gly	Gln	Ala	Asn	Tyr	Val	Ala	Thr		
145					150					155					160		
Lys	Ala	Gly	Val	Ile	Gly	Leu	Thr	Lys	Thr	Ala	Ala	Arg	Glu	Leu	Ala		
				165					170					175			
Ser	Arg	Gly	Ile	Thr	Val	Asn	Ala	Val	Ala	Pro	Gly	Phe	Ile	Val	Ser		
			180					185					190				
Asp	Met	Thr	Asn	Ala	Leu	Ser	Asp	Asp	Leu	Lys	Asp	Gln	Met	Leu	Glu		
		195					200					205					
Gln	Ile	Pro	Leu	Lys	Arg	Phe	Gly	Glu	Asp	Thr	Asp	Ile	Ala	Asn	Thr		
	210					215					220						
Val	Ala	Phe	Leu	Ala	Ser	Asp	Lys	Ala	Lys	Tyr	Ile	Thr	Gly	Gln	Thr		
225					230					235					240		
Ile	His	Val	Asn	Gly	Gly	Met	Tyr	Met									
				245													

<210> 5676

<211> 46

<212> PRT

<213> S.epidermidis

<400> 5676

Tyr	Ser	Leu	Ile	Leu	Asn	Leu	Ile	Asp	Ser	Ser	Ile	Lys	Ile	Gly	Gly		
1				5					10					15			
Val	Val	Met	Leu	Ile	His	Tyr	Gly	Val	Pro	Leu	Leu	Ile	Phe	Ala	Leu		

```
<210> 5677
<211> 76
<212> PRT
<213> S.epidermidis
```

Asn	Gly	Leu	Ile	Glu	Asn	Gln	Met	Glu	Phe	Tyr	Asn	His	Leu	Val	Tyr
1				5					10					15	
Lys	Glu	Thr	His	Tyr	Asn	Val	Leu	Leu	Lys	Cys	Lys	Asp	Asp	Tyr	Tyr
			20					25					30		
His	Tyr	Phe	Val	Pro	Leu	Asp	Ala	Ser	Ser	Pro	Phe	Ile	Tyr	Tyr	Asp
		35					40					45			
Lys	Leu	Ser	Arg	Gln	Ser	Thr	Asn	Val	Trp	Ile	Ser	Phe	Lys	Glu	Ile
	50					55					60				
Leu	Pro	Ser	Ser	Phe	Ala	Thr	Ser	Ile	Ser	Ser	Leu				
65					70					75					

<400> 5678

Asn 1	Lys	Met	Ile	Tyr 5	Ala	Tyr	Ile	Gly	Ile 10	Thr	Val	Leu	Trp	Val 15	Phe
Leu	Phe	Cys	Tyr 20	Ile	Ile	Ile	Ala	Ser 25	Ile	Asp	Phe	Gly	Ala 30	Gly	Phe
Phe	Ala	Leu	His 35	Ser	Lys	Met	Thr 40	Gly	Asn	Glu	Lys	Lys 45	Val	Asn	His
Leu	Ile 50	His	Arg	Tyr	Leu	Asn 55	Pro	Val	Trp	Glu	Val 60	Thr	Asn	Val	Phe
Phe 65	Val	Phe	Phe	Phe 70	Val	Gly	Phe	Ile	Gly	Phe 75	Phe	Pro	Asp	Ser	Ala 80
Lys	Tyr	Leu	Gly 85	Thr	Val	Leu	Leu	Val	Pro 90	Gly	Ser	Ile	Ala 95	Leu	Ile
Leu	Ile	Ser 100	Ile	Arg	Ser	Ser	Phe 105	Tyr	Ala	Phe	Glu	Asn 110	Tyr	Gly	Gln
Asp	Thr	Lys 115	Leu	Pro	Trp	Ile	Val 120	Leu	Tyr	Gly	Leu	Thr 125	Gly	Leu	Leu
Ile	Pro 130	Ala	Ser	Leu	Ala	Thr 135	Ala	Leu	Thr	Ile	Ser 140	Glu	Gly	Gly	Tyr
Ile 145	Tyr	Glu	His	Gly 150	Thr	His	Ile	Asp	Leu	Asp 155	Trp	Ile	Gln	Leu	Leu 160
Leu	Ser	Pro	Phe 165	Ala	Trp	Ser	Val	Val	Phe 170	Leu	Ala	Ile	Val 175	Ser	Val
Leu	Tyr	Ile 180	Ser	Ser	Gly	Phe	Leu	Thr 185	Tyr	Tyr	Ala	His 190	Lys	Ala	Asn
Asp	Gln 195	Pro	Ala	Tyr	Asp	Met	Thr 200	Arg	Gln	Trp	His 205	Ile	Phe	Trp	Gly
Pro	Pro 210	Met	Ile	Val	Ile	Ser 215	Leu	Phe	Val	Phe 220	Leu	Ser	Leu	Arg	Ile
Gln	Asn	Ser	Asp	His	Phe	Arg	Thr	Ala	Ile	Phe	Asn	Tyr	Trp	Trp	Met

Val Pro Gly Tyr Tyr Gly Val Asn Ser Ile Asp Leu Met Thr Asp Leu
 275 280 285
 Tyr His Lys Gly Val His Thr Leu Val Thr Asp Arg Pro Asp Leu Gly
 290 295 300
 Gln Gln Phe Lys Glu Thr Leu Lys
 305 310

<210> 5680

<211> 42

<212> PRT

<213> S.epidermidis

<400> 5680

Tyr Ile Ser Met Val Ile Tyr Ser Phe Tyr Val Glu Lys Phe Leu Lys
 1 5 10 15
 His Tyr Asp Tyr Asn Thr Val Asn Asn Lys Ser Tyr Asp Lys Thr Arg
 20 25 30
 Ser Lys Ser Ser Tyr Phe Ala Ser Leu Cys
 35 40

<210> 5681

<211> 235

<212> PRT

<213> S.epidermidis

<400> 5681

Lys Glu Lys Met Ser Val Arg Asn Leu Pro Ile Ile Ala Leu Asp Phe
 1 5 10 15
 Lys Ser Ala Asp Glu Val His Thr Phe Leu Asn Lys Phe Asn Glu Pro
 20 25 30
 Leu Cys Val Lys Ile Gly Met Glu Leu Phe Tyr Gln Thr Gly Pro Ala
 35 40 45
 Leu Ile Lys Ser Ile Lys Lys Arg Gly His Asp Ile Phe Leu Asp Leu
 50 55 60
 Lys Leu His Asp Ile Pro Asn Thr Val Ser Lys Ala Met Glu Gly Leu
 65 70 75 80
 Ala Arg Leu Asp Val Asp Leu Val Asn Val His Ala Ala Gly Gly Ile
 85 90 95
 Lys Met Met Glu Glu Ala Lys Lys Gly Leu Arg Lys His Asn Ala Asp
 100 105 110
 Ile Lys Ile Ile Ala Val Thr Gln Leu Thr Ser Thr Thr Glu Arg Gln
 115 120 125
 Leu His Glu Glu Gln Asn Ile Gln Thr Ser Ile Glu Glu Ala Val Leu
 130 135 140
 Asn Tyr Ala Arg Leu Thr Lys Lys Ala Gly Leu Asp Gly Val Val Cys
 145 150 155 160
 Ser Pro Leu Glu Ala Glu Met Ile Ser Lys Glu Leu Gly Thr Asp Phe
 165 170 175
 Leu Lys Val Thr Pro Gly Ile Arg Pro Lys Gly Ala Ala Arg Asn Asp
 180 185 190
 Gln Gln Arg Ile Thr Thr Pro Glu Glu Ala Lys Thr Leu Gly Ser Thr
 195 200 205
 His Ile Val Val Gly Arg Pro Ile Thr Gln Ser Glu His Pro Ile Asp
 210 215 220
 Ser Tyr His Lys Ile Lys Glu Ser Trp Leu Ser
 225 230 235

<210> 5682
 <211> 48
 <212> PRT
 <213> S.epidermidis

<400> 5682
 Lys Asn Asp Phe Lys Leu Met Tyr Ile Phe Leu Leu Leu Thr Tyr Tyr
 1 5 10 15
 Ile Lys Asn His Ile Phe Lys Cys Val Thr Lys Leu Thr Ile Ser Asn
 20 25 30
 Val Val Lys Val Ser Gln Phe Asn Phe Ile Lys Pro Asn Leu Phe Val
 35 40 45

<210> 5683
 <211> 67
 <212> PRT
 <213> S.epidermidis

<400> 5683
 Asp Gly Thr Val Ser Ile Leu Ser Leu Leu Ala Asn Ile Ile Ile Ala
 1 5 10 15
 Met Ile Lys Asn Lys Ile Gly Met Ile Arg Val Thr Ile Asn Asn Thr
 20 25 30
 Ser Gly Ile Val Thr Ile Ala Ala Ile Lys Lys Arg Lys Pro Asp Lys
 35 40 45
 Ile Leu Ile Phe Ile Glu Ile Asn Ala Lys Asn Glu Met Ser Lys Gln
 50 55 60
 Thr Ile Lys
 65

<210> 5684
 <211> 163
 <212> PRT
 <213> S.epidermidis

<400> 5684
 Val Met Thr Val Lys Lys Leu Val Lys Ser Thr His Pro Ile Leu Asn
 1 5 10 15
 Lys Thr Ile Gln Pro Val Ser Thr Tyr Asp Gln Lys Leu Lys Val Leu
 20 25 30
 Leu Glu Asp Leu Glu Asp Thr Leu Tyr His Glu Glu Ala Ala Ala Ile
 35 40 45
 Ser Ala Pro Gln Ile Gly Val Asp Gln Ser Val Ala Leu Ile Asp Met
 50 55 60
 Glu Gln Glu Gly Leu Leu Gln Leu Ile Asn Pro Val Val Lys Ser Gln
 65 70 75 80
 Ser Gln Glu Thr Val Ser Asp Leu Glu Gly Ser Ile Ser Leu Pro His
 85 90 95
 Ile Tyr Gly Glu Val Lys Arg Ser Lys Met Ile Thr Val Gln Ser Tyr
 100 105 110
 Asp Ile Asn Gly Asn Ala Val Glu Leu Thr Ala Tyr Asp Asp Ile Ala
 115 120 125
 Arg Met Ile Leu His Met Ile Asp His Leu Asn Gly Ile Gln Phe Thr
 130 135 140
 Lys Arg Ala His His Ile Leu Asn Glu Thr Glu Val Glu Ala Tyr Phe

145 150 155 160
 Asp Asn Glu

<210> 5685
 <211> 95
 <212> PRT
 <213> S.epidermidis

<400> 5685
 Gly Glu Tyr Val Met Ser Asn Gln Ser Lys Leu Asn Ser Ala Ala Tyr
 1 5 10 15
 Asp Gln Leu Asn Lys Asp Ala Asp Arg Ile Leu His Leu Ile Lys Val
 20 25 30
 Gln Met Asp Asn Leu Thr Leu Pro Ser Cys Pro Leu Tyr Glu Glu Val
 35 40 45
 Leu Asp Thr Gln Met Phe Gly Leu Gln Lys Glu Val Asp Phe Ala Val
 50 55 60
 Gln Leu Gly Leu Val Asp Lys Glu Asp Gly Lys Gln Leu Met Leu Arg
 65 70 75 80
 Leu Glu Lys Glu Leu Ser Lys Leu His Glu Ala Phe Thr Asn Val
 85 90 95

<210> 5686
 <211> 223
 <212> PRT
 <213> S.epidermidis

<400> 5686
 Phe Met Asp Val Lys Glu Asn Leu Ala Lys Ile Glu Lys Glu Ile Asp
 1 5 10 15
 Ala Ser Ile Lys Lys Ser Ala His Ser Ala Gln Pro His Val Ile Ala
 20 25 30
 Val Thr Lys Tyr Val Thr Ile Glu Arg Ala Arg Glu Ala Tyr Lys Val
 35 40 45
 Gly Ile Arg His Phe Gly Glu Asn Arg Leu Asp Gly Phe Lys Glu Lys
 50 55 60
 Lys Glu Ser Leu Pro Ser Asp Val Lys Leu His Phe Ile Gly Ser Leu
 65 70 75 80
 Gln Ser Arg Lys Val Lys Asp Ile Ile Asn Glu Val Asp Tyr Phe His
 85 90 95
 Ala Leu Asp Arg Leu Ser Leu Ala Lys Glu Ile Asn Lys Arg Ala Asn
 100 105 110
 His Val Ile Lys Cys Phe Leu Gln Val Asn Val Ser Gly Glu Glu Ser
 115 120 125
 Lys His Gly Ile Ala Leu Glu Val Asn Gln Phe Ile Asn Gln Ile
 130 135 140
 Lys Glu Tyr Glu Asn Ile Gln Ile Ile Gly Leu Met Thr Met Ala Pro
 145 150 155 160
 Leu Thr Asp Asp Leu Ser Tyr Ile Arg Asn Leu Phe Lys Glu Leu Arg
 165 170 175
 His Lys Arg Asn Glu Ile Gln Gln Phe Asn Leu Ala His Ala Pro Cys
 180 185 190
 Thr Glu Leu Ser Met Gly Met Ser Asn Asp Tyr Gln Met Ala Val Glu
 195 200 205
 Glu Gly Ala Thr Phe Val Arg Ile Gly Thr Lys Leu Val Gly Glu

210

215

220

<210> 5687

<211> 467

<212> PRT

<213> S.epidermidis

<400> 5687

```

Leu Leu Arg Val Lys Asn Leu Arg Leu Lys Tyr Pro Asn Gly Asp Arg
1      5      10      15
Lys Ile Phe Asn Asn Leu Asn Leu Glu Ile Lys Asn Lys Glu Lys Val
20      25      30
Leu Leu Leu Gly Pro Ser Gly Ser Gly Lys Ser Thr Leu Leu Asn Val
35      40      45
Leu Ser Gly Ile Val Pro Asn Leu Ile Glu Leu Pro Met Lys Tyr Asp
50      55      60
Glu Leu Asn Ile Asp His Asp Ser Gly Val Ile Phe Gln Asp Pro Asp
65      70      75      80
Asn Gln Phe Cys Met Pro Lys Val Tyr Glu Glu Leu Ala Phe Val Leu
85      90      95
Glu Asn Arg Asn Ile Pro Arg Ser Glu Met Asp Gln Glu Ile Glu Asp
100     105     110
Ala Leu Lys Ser Val Asp Leu Asn Val Thr His Lys Thr Tyr Val Asn
115     120     125
Asn Leu Ser Gly Gly Met Lys Gln Lys Leu Ala Ile Val Glu Thr Ile
130     135     140
Leu Gln Lys Ser Lys Thr Leu Phe Leu Asp Glu Pro Thr Ala Met Leu
145     150     155     160
Asp Val Lys Ala Thr Glu Asp Leu Trp Lys Lys Leu Ile Asn Leu Trp
165     170     175
Glu Asp Gln Thr Val Leu Ile Val Glu His Lys Val Glu His Ile Trp
180     185     190
Gln His Val Asp Arg Val Leu Leu Leu Asn Tyr Asp Gly Glu Ile Val
195     200     205
Ala Asp Asp Thr Pro Glu Gln Ile Leu Asp His Tyr Glu Ala Leu Leu
210     215     220
Thr Glu Tyr Gly Val Trp His Pro Arg Ala Trp His Ser Ala Pro Arg
225     230     235     240
Pro Ile Pro Leu Pro Asn Gln Thr Lys Asn Leu Leu Phe His Phe Asp
245     250     255
Asp Gly Gln Ile Ile Arg Gly Lys Lys Thr Leu Phe Ser Ser Lys Glu
260     265     270
Leu Lys Leu Tyr Ser Gly Glu Trp Leu Thr Ile Thr Gly Lys Asn Gly
275     280     285
Ala Gly Lys Thr Ser Leu Leu Glu Ala Met Leu Gln Leu Ile Lys Tyr
290     295     300
Glu Gly Asp Met Phe Tyr Arg Asp Gln Leu Leu Ser Lys Ile Lys Gln
305     310     315     320
Ala Ala Lys His Met Tyr Leu Val Tyr Gln Asn Pro Glu Leu Gln Phe
325     330     335
Ile Thr Asn Ser Val Tyr Asp Glu Val Tyr Ile His Tyr Asn His Leu
340     345     350
Asp Pro Lys His Ala Asn Asp Glu Thr Met Asp Leu Leu Lys Leu Leu
355     360     365
His Leu Asp Gln Val Lys Asp His His Pro Phe Glu Ile Ser Thr Gly
370     375     380

```

Gln Lys Arg Arg Leu Ser Val Ala Thr Ala Leu Ser Ser Lys Ala Glu
 385 390 395 400
 Ile Ile Leu Leu Asp Glu Pro Thr Phe Gly Leu Asp Ser His Asn Thr
 405 410 415
 Phe Gln Leu Ile Lys Leu Phe Gln Glu Arg Val Asn Gln Gly Gln Thr
 420 425 430
 Ile Ile Met Val Thr His Asp Pro Glu Ile Ile Lys Arg Tyr Pro Thr
 435 440 445
 Arg Arg Leu Arg Val Glu Asp Gly Cys Leu Lys Glu Met Glu Gly Glu
 450 455 460
 His Ile Val
 465

<210> 5688

<211> 137

<212> PRT

<213> S.epidermidis

<400> 5688

Gly Val Ser Val Met Ala Val Glu Lys Ile Tyr Gln Pro Tyr Asp Glu
 1 5 10 15
 Ala Thr Gln Thr Ser Ile Pro Gln Arg Gln Pro Gln Ser Ser Pro Glu
 20 25 30
 Lys Gln Thr Val Lys Arg Lys Val Val Val Gln Leu Thr Arg Phe Glu
 35 40 45
 Lys Ile Leu Tyr Ile Ala Leu Ile Thr Val Ile Ala Leu Ile Ser Ile
 50 55 60
 Tyr Met Leu Ser Leu Lys Met Asp Ala Tyr Asp Thr Arg Gly Lys Ile
 65 70 75 80
 Ala Asp Leu Asp Gln Lys Ile Glu Lys Gln Ser Ser Glu Asn Ser Ala
 85 90 95
 Leu Lys Ser Glu Ile Lys Lys Asn Ser Ser Tyr Glu Arg Ile Tyr Asp
 100 105 110
 Lys Ala Lys Lys Gln Gly Met Ser Leu Glu Asn Asp Asn Val Lys Val
 115 120 125
 Val Arg Asn Asn Gly Glu Ala Lys Asn
 130 135

<210> 5689

<211> 296

<212> PRT

<213> S.epidermidis

<400> 5689

Met Arg Gly Val Phe Leu Lys Thr Gly Arg Ile Val Lys Leu Ile Ser
 1 5 10 15
 Gly Val Tyr Gln Val Asp Val Glu Gly Arg Phe Asp Thr Lys Pro
 20 25 30
 Arg Gly Leu Phe Arg Lys Lys Lys Phe Ser Pro Val Val Gly Asp Ile
 35 40 45
 Val Asp Phe Glu Val Gln Asn Thr Lys Glu Gly Tyr Ile His His Val
 50 55 60
 His Asp Arg Asn Asn Glu Leu Lys Arg Pro Pro Val Ser Asn Ile Asp
 65 70 75 80
 Glu Leu Val Ile Val Met Ser Ala Val Glu Pro Glu Ile Ser Thr Gln
 85 90 95

2400

```

Leu Leu Asp Arg Tyr Leu Val Ile Ala His Ser Tyr His Leu Lys Pro
      100      105      110
Arg Ile Leu Ile Thr Lys His Asp Leu Ala Ser Glu Gln Glu Ile Leu
      115      120      125
Lys Ile Lys Asp Thr Ile Lys Ile Tyr Gln Lys Ile Gly Tyr Ala Thr
      130      135      140
Gln Phe Ile Gly Lys Asp Ser Asn Tyr Thr Ala Thr Val Asp Glu Trp
145      150      155      160
Ser Asp Gly Leu Ile Val Leu Ser Gly Gln Ser Gly Val Gly Lys Ser
      165      170      175
Thr Phe Leu Asn Ser Tyr Gln Pro Gln Leu Lys Leu Glu Thr Asn Asp
      180      185      190
Ile Ser Lys Ser Leu Asn Arg Gly Lys His Thr Thr Arg His Val Glu
      195      200      205
Leu Tyr Asp Arg Lys Gly Gly Tyr Ile Ala Asp Thr Pro Gly Phe Ser
      210      215      220
Ala Leu Asp Phe Asn His Ile Glu Lys Glu Gln Leu Lys Asp Phe Phe
225      230      235      240
Ile Asp Ile His Glu Ala Gly Glu Gln Cys Lys Phe Arg Asn Cys Asn
      245      250      255
His Ile Lys Glu Pro Gln Cys His Val Lys Ala Leu Val Glu Lys Gly
      260      265      270
Glu Ile Pro Gln Phe Arg Tyr Asp His Tyr Gln Gln Leu Tyr Asn Glu
      275      280      285
Ile Ser Asn Arg Lys Val Arg Tyr
      290      295

```

<210> 5690

<211> 73

<212> PRT

<213> S.epidermidis

<400> 5690

```

Asn Lys Cys Leu Tyr Ile Phe Leu Ala Lys Met Ile Met Thr Phe Leu
1      5      10      15
Phe Asn His Thr Thr Thr Leu Lys Arg Leu Lys Asp Phe Lys Tyr Phe
      20      25      30
Asn Cys Asn Leu Ile Ile Leu Trp Leu Ser Val Thr His Pro Val Thr
      35      40      45
Phe Lys Asn Tyr Asn Ala Thr Asn Ile Met Ile Phe Ile Met Ser Thr
      50      55      60
Asn Thr Asn Thr Cys Ser Arg Thr Leu
65      70

```

<210> 5691

<211> 927

<212> PRT

<213> S.epidermidis

<400> 5691

```

Ser Ser Phe Leu Ser Leu Gln Gly Val Asn Leu Met Asn Tyr Lys Asp
1      5      10      15
Thr Leu Leu Met Pro Lys Thr Asp Phe Pro Met Arg Gly Gly Leu Pro
      20      25      30
Asn Lys Glu Pro Gln Ile Gln Glu Met Trp Asp Asn Asp Glu Gln Tyr
      35      40      45

```

bioRxiv preprint doi: <https://doi.org/10.1101/000000>; this version posted January 1, 2015. The copyright holder for this preprint (which was not certified by peer review) is the author/funder, who has granted bioRxiv a license to display the preprint in perpetuity. It is made available under aCC-BY-NC-ND 4.0 International license.

Arg	Lys	Ala	Leu	Glu	Lys	Asn	Lys	Asn	Asn	Pro	Ser	Phe	Ile	Leu	His
50						55					60				
Asp	Gly	Pro	Pro	Tyr	Ala	Asn	Gly	Asn	Leu	His	Met	Gly	His	Ala	Leu
65					70					75					80
Asn	Lys	Ile	Ile	Lys	Asp	Phe	Ile	Val	Arg	Tyr	Lys	Thr	Met	Gln	Gly
				85					90					95	
Phe	Tyr	Ala	Pro	Tyr	Val	Pro	Gly	Trp	Asp	Thr	His	Gly	Leu	Pro	Ile
			100					105					110		
Glu	Gln	Ala	Leu	Thr	Lys	Lys	Gly	Val	Asp	Arg	Lys	Lys	Met	Ser	Val
		115					120					125			
Ala	Glu	Phe	Arg	Glu	Lys	Cys	Lys	Glu	Phe	Ala	Leu	Lys	Gln	Ile	Asp
130						135					140				
Ile	Gln	Lys	Lys	Asp	Phe	Lys	Arg	Leu	Gly	Val	Arg	Gly	Asp	Phe	Asn
145					150					155					160
Asn	Pro	Tyr	Ile	Thr	Leu	Thr	Pro	Glu	Tyr	Glu	Ala	Ala	Gln	Ile	Arg
				165					170					175	
Leu	Phe	Gly	Glu	Met	Ala	Asp	Lys	Gly	Leu	Ile	Tyr	Lys	Gly	Lys	Lys
			180					185					190		
Pro	Val	Tyr	Trp	Ser	Pro	Ser	Ser	Glu	Ser	Ser	Leu	Ala	Glu	Ala	Glu
		195					200					205			
Ile	Glu	Tyr	His	Asp	Lys	Arg	Ser	Ala	Ser	Ile	Tyr	Val	Ala	Phe	Asp
210						215					220				
Val	Lys	Asp	Ser	Lys	Gly	Lys	Val	Asp	Ser	Asp	Ala	Gln	Phe	Ile	Ile
225					230					235					240
Trp	Thr	Thr	Thr	Pro	Trp	Thr	Ile	Pro	Ser	Asn	Val	Ala	Ile	Thr	Val
				245					250					255	
His	Pro	Glu	Leu	Lys	Tyr	Gly	Gln	Tyr	Asn	Val	Asp	Gly	His	Lys	Tyr
			260					265					270		
Ile	Val	Ala	Gln	Ala	Leu	Ser	Glu	Glu	Val	Ala	Glu	Ala	Leu	Gly	Trp
		275					280					285			
Asp	Lys	Asp	Ser	Ile	Gln	Leu	Lys	Glu	Phe	Thr	Gly	Lys	Glu	Leu	
290						295				300					
Glu	Phe	Ile	Glu	Ala	Gln	His	Pro	Phe	Leu	Asp	Arg	Val	Ser	Leu	Val
305					310					315					320
Ile	Asn	Gly	Glu	His	Val	Thr	Thr	Asp	Ala	Gly	Thr	Gly	Cys	Val	His
				325					330					335	
Thr	Ala	Pro	Gly	His	Gly	Glu	Asp	Asp	Tyr	Ile	Val	Gly	Gln	Lys	Tyr
			340					345					350		
Asp	Leu	Pro	Val	Ile	Ser	Pro	Leu	Asn	Asp	Lys	Gly	Val	Phe	Thr	Glu
		355					360					365			
Glu	Gly	Gly	Pro	Phe	Glu	Gly	Met	Phe	Tyr	Asp	Lys	Ala	Asn	Lys	Ala
370						375					380				
Val	Thr	Asp	Leu	Leu	Lys	Glu	Lys	Asp	Ala	Leu	Leu	Lys	Leu	Asp	Phe
385					390					395					400
Ile	Thr	His	Ser	Tyr	Pro	His	Asp	Trp	Arg	Thr	Lys	Lys	Pro	Val	Ile
				405					410					415	
Phe	Arg	Ala	Thr	Pro	Gln	Trp	Phe	Ala	Ser	Ile	Asn	Lys	Val	Arg	Gln
			420					425					430		
Asp	Ile	Leu	Asp	Ala	Ile	Glu	Asp	Thr	Asn	Phe	Lys	Val	Asp	Trp	Gly
		435					440					445			
Lys	Thr	Arg	Ile	Tyr	Asn	Met	Ile	Arg	Asp	Arg	Gly	Glu	Trp	Val	Ile
		450				455					460				
Ser	Arg	Gln	Arg	Val	Trp	Gly	Val	Pro	Leu	Pro	Val	Phe	Tyr	Ala	Glu
465					470					475					480
Asn	Gly	Asp	Ile	Ile	Met	Thr	Lys	Glu	Thr	Val	Asn	His	Val	Ala	Asp
				485					490					495	


```
<211> 451
<212> PRT
<213> S.epidermidis
```

<400> 5692

Met 1	Asp	Ser	Val	Glu 5	Ile	Ala	Arg	Leu 10	Leu	Thr	Gly	Met	Thr	Leu 15	Ala
Val	His	Ile	Ile 20	Phe	Ala	Thr	Ile	Gly 25	Val	Gly	Met	Pro	Leu 30	Met	Phe
Ala	Ile	Ala 35	Glu	Phe	Ile	Gly	Ile 40	Lys	Lys	Asn	Asp	Ala 45	Asn	Tyr	Ile
Thr	Leu 50	Ala	Lys	Arg	Trp	Ser 55	Lys	Gly	Tyr	Thr	Ile 60	Thr	Val	Ala	Val
Gly 65	Val	Val	Thr	Gly 70	Thr	Ile	Ile	Gly	Leu	Gln 75	Leu	Ser	Leu	Val	Trp 80
Pro	Thr	Phe	Met	Lys 85	Met	Gly	Gly	His	Val 90	Ile	Ala	Leu	Pro	Leu 95	Phe
Met	Glu	Thr 100	Phe	Ala	Phe	Phe	Phe 105	Glu	Ala	Ile	Phe	Leu	Ser 110	Ile	Tyr
Leu	Tyr	Thr 115	Trp	Glu	Arg	Phe	Lys 120	Asn	Lys	Trp	Thr	His 125	Phe	Phe	Ile
Ser	Ile 130	Pro	Val	Ile	Ile	Gly 135	Gly	Ser	Phe	Ser	Ala 140	Phe	Phe	Ile	Thr
Ser 145	Val	Asn	Ser	Phe 150	Met	Asn	Thr	Pro	Ala	Gly 155	Phe	Glu	Ile	Lys	Asn 160
Gly	Arg	Met	Val	Asn 165	Val	Gln	Pro	Leu	Glu 170	Ala	Met	Phe	Asn 175	Ser	Ser
Phe	Met	Val 180	Arg	Ala	Leu	His	Val 185	Val	Ala	Thr	Ala	Gly 190	Met	Thr	Met
Ala	Phe 195	Ile	Leu	Ala	Ala	Ile 200	Ala	Ala	Phe	Lys	Leu 205	Leu	Arg	His	Asn
His	Thr 210	Glu	Asp	Arg	Thr	Tyr 215	His	Thr	Lys	Ala	Leu 220	Asn	Leu	Ser	Met
Ile 225	Val	Gly	Phe	Ile 230	Asn	Thr	Val	Leu	Ser	Met 235	Ile	Ala	Gly	Asp	Leu 240
Ser	Ala	Lys	Phe 245	Leu	His	Lys	Val	Gln	Pro 250	Asp	Lys	Leu	Ala 255	Ala	Tyr
Glu	Trp	His 260	Tyr	Asp	Thr	Gln	Ser 265	His	Ala	Asn	Leu 270	Val	Leu	Phe	Gly
Val	Leu 275	Asn	Glu	Lys	Thr	His 280	Glu	Val	Ser	Gly	Ala 285	Leu	Glu	Ile	Pro
Gly	Leu 290	Leu	Ser	Phe	Leu	Ala 295	Asp	Asn	Ser	Phe 300	Asn	Thr	Lys	Val	Lys
Gly 305	Leu	Asn	Glu	Phe 310	Pro	Lys	Asn	Glu	Leu 315	Pro	Pro	Met	Ile	Val	His 320
Tyr	Phe	Phe 325	Asp	Leu	Met	Val	Ser	Met	Gly 330	Ile	Phe	Cys	Phe 335	Ile	Ile
Ser	Gly	Leu 340	Tyr	Met	Leu	Phe	Leu 345	Ile	Val	Lys	Lys	Leu 350	Arg	Lys	Tyr
Val	Thr 355	Ser	Asn	Met	Met	Leu 360	Tyr	Ala	Ile	Leu	Leu 365	Thr	Gly	Pro	Ala
Ser	Met 370	Leu	Ala	Ile	Glu	Phe 375	Gly	Trp	Phe	Leu 380	Thr	Glu	Met	Gly	Arg
Gln 385	Pro	Trp	Ile	Ile 390	Arg	Gly	Tyr	Met	Arg 395	Val	Ser	Glu	Ala	Ala	Thr
Gln	Ala	Gly	Gly	Ile	Thr	Leu	Val	Thr	Thr	Leu	Phe	Gly	Leu	Leu	Tyr

405 410 415
 Leu Leu Leu Leu Val Thr Ser Ala Tyr Val Leu Ile Arg Met Phe Lys
 420 425 430
 Asn Gln Pro Ala Tyr Lys Asp Val Glu Lys Val Ile Lys Glu Arg Gly
 435 440 445
 Glu Thr Lys
 450

<210> 5693
 <211> 48
 <212> PRT
 <213> S.epidermidis

<400> 5693
 Ser Cys Ser Val Asn Phe Asn Val Leu His Phe Met Tyr Leu Leu Leu
 1 5 10 15
 His Tyr His Tyr Ser Ser Tyr Ser Ile Lys Ile Ile Phe Leu Ile Asp
 20 25 30
 Asn Leu Thr Ala Tyr Lys Leu Ile Tyr Leu Asn Phe Leu Gln Ile Asn
 35 40 45

<210> 5694
 <211> 102
 <212> PRT
 <213> S.epidermidis

<400> 5694
 Lys Ile Lys Val Tyr Glu Gly Glu Asp Thr Met Glu Tyr Gln Tyr Pro
 1 5 10 15
 Leu Asp Leu His Trp Thr Asn Asp Glu Met Met Lys Val Ile His Phe
 20 25 30
 Phe Asn Lys Ile Glu Asn Tyr Tyr Glu Ala Ser Val Lys Gly Asp Glu
 35 40 45
 Val Leu Asn Ala Tyr Lys Asn Phe Lys His Ile Val Pro Gly Lys Ala
 50 55 60
 Asp Glu Lys Gln Ile Phe Lys Glu Phe Glu Asn Lys Ser Gly Tyr Asn
 65 70 75 80
 Ser Tyr Lys Val Val Gln Glu Ile Lys Lys Asn Pro Asn Gln Thr Leu
 85 90 95
 Phe Ser Lys Asp Phe Asp
 100

<210> 5695
 <211> 341
 <212> PRT
 <213> S.epidermidis

<400> 5695
 Phe Leu Lys Val Asn Ser Lys Cys Thr Ile Gln Val Arg Met Asn Glu
 1 5 10 15
 Met Val Lys Ile Ala Val Asp Met Met Gly Gly Asp Asp Ala Pro Gly
 20 25 30
 Ile Val Leu Asp Ala Val Lys Lys Ala Val Glu Asp Phe Lys Asp Leu
 35 40 45
 Glu Ile Ile Leu Phe Gly Asp Glu Ser Gln Tyr Asn Leu Ser His Glu
 50 55 60

Arg Ile Glu Phe Arg His Cys Thr Glu Lys Ile Glu Met Glu Asp Glu
 65 70 75 80
 Pro Val Arg Ala Ile Lys Arg Lys Lys Asp Ser Ser Met Val Lys Met
 85 90 95
 Ala Glu Ala Val Lys Ser Gly Glu Ala Asp Gly Cys Val Ser Ala Gly
 100 105 110
 Asn Thr Gly Ala Leu Met Ser Ala Gly Leu Phe Ile Val Gly Arg Ile
 115 120 125
 Lys Gly Val Ala Arg Pro Ala Leu Val Val Thr Leu Pro Thr Thr Asp
 130 135 140
 Gly Lys Gly Phe Val Phe Leu Asp Val Gly Ala Asn Ala Asp Ala Lys
 145 150 155 160
 Ala Glu His Leu Leu Gln Tyr Ala Gln Leu Gly Asn Ile Tyr Ala Gln
 165 170 175
 Lys Ile Arg Gly Ile Gln Asn Pro Ser Val Ser Leu Leu Asn Ile Gly
 180 185 190
 Thr Glu Ala Ala Lys Gly Asn Ser Leu Thr Lys Lys Ala Tyr Asp Leu
 195 200 205
 Phe Glu Lys Asn Gln Ser Phe Asn Phe Thr Gly Asn Ile Glu Ala Lys
 210 215 220
 Thr Leu Met Asp Gly Asn Val Asp Val Val Val Thr Asp Gly Tyr Thr
 225 230 235 240
 Gly Asn Met Val Leu Lys Asn Leu Glu Gly Thr Ala Lys Ser Ile Gly
 245 250 255
 Lys Met Leu Lys Glu Thr Ile Met Ser Ser Phe Lys Asn Lys Leu Ala
 260 265 270
 Gly Ala Val Leu Lys Lys Asp Leu Glu Thr Phe Ala Lys Lys Met Asp
 275 280 285
 Tyr Ser Glu Tyr Gly Gly Ser Val Leu Leu Gly Leu Asp Gly Thr Val
 290 295 300
 Val Lys Ala His Gly Ser Ser Asn Ala Lys Ala Phe Tyr Ser Ala Ile
 305 310 315 320
 Arg Gln Ala Lys Ile Ala Gly Glu Glu Asn Ile Val Gln Ile Met Lys
 325 330 335
 Asp Thr Val Gly Glu
 340

<210> 5696

<211> 276

<212> PRT

<213> S.epidermidis

<400> 5696

Trp Glu Gly Val Ile Ser Val Lys Trp Tyr Gly Lys Leu Tyr Ile Ala
 1 5 10 15
 Leu Leu Ile Ser Val Leu Tyr Ile Pro Ile Phe Phe Leu Met Ile Tyr
 20 25 30
 Ser Phe Asn Ser Ala Gly Asn Met Ser His Phe Glu His Phe Thr Leu
 35 40 45
 Glu His Tyr His Ser Leu Phe His Asn Asp Arg Leu Met Ser Val Ile
 50 55 60
 Phe Asn Thr Val Ala Val Ala Leu Leu Ser Ala Ser Ile Ala Thr Val
 65 70 75 80
 Ile Gly Thr Phe Gly Ala Ile Ala Leu Tyr Tyr Leu Arg Asn Lys Arg
 85 90 95
 Phe Lys Val Thr Leu Leu Thr Met Asn Asn Val Leu Met Val Ser Ser

Gly Glu Asn Pro Gln Gln Ser Ala Tyr Phe Val Arg Thr Ser Asp Ser
 210 215 220
 Lys His Thr Ile Ala Gly Ala Lys Gln Leu His Gly Lys Gln Leu Ser
 225 230 235 240
 Phe Asn Asn Ile Lys Asp Ala Asp Ala Ala Leu Ser Leu Val Lys Lys
 245 250 255
 Phe Asn Glu Pro Thr Ala Val Ala Val Lys His Met Asn Pro Cys Gly
 260 265 270
 Val Gly Ile Gly Gln Ser Ile Asp Glu Ala Phe Gln His Ala Tyr Glu
 275 280 285
 Ala Asp Asn Gln Ser Ile Phe Gly Gly Ile Ile Ala Leu Asn Arg Thr
 290 295 300
 Val Asp Val Lys Leu Ala Glu Ala Leu His Ser Ile Phe Leu Glu Val
 305 310 315 320
 Val Ile Ala Pro Gln Phe Thr Glu Glu Ala Leu Lys Ile Leu Thr Gln
 325 330 335
 Lys Lys Asn Ile Arg Leu Leu Gln Ile Asp Met Thr Ile Asp Asn Ala
 340 345 350
 Glu Gln Glu Phe Val Ser Val Ser Gly Gly Tyr Leu Val Gln Asp Lys
 355 360 365
 Asp Asn Lys Asp Val Thr Arg Asn Asp Met Thr Val Ala Thr Asp Ile
 370 375 380
 Gln Pro Thr Glu Ala Gln Trp Glu Ala Met Leu Leu Gly Trp Lys Val
 385 390 395 400
 Val Ser Ala Val Lys Ser Asn Ala Val Ile Leu Ser Asn Asn Lys Gln
 405 410 415
 Thr Val Gly Ile Gly Ala Gly Gln Met Asn Arg Val Gly Ser Ala Lys
 420 425 430
 Ile Ala Ile Glu Arg Ala Ile Glu Ile Asn Asp Asn Val Ala Leu Val
 435 440 445
 Ser Asp Gly Phe Phe Pro Met Gly Asp Thr Val Glu Tyr Ala Ala Glu
 450 455 460
 His Gly Ile Lys Ala Ile Ile Gln Pro Gly Gly Ser Ile Lys Asp Gln
 465 470 475 480
 Asp Ser Ile Asp Met Ala Asn Lys Tyr Gly Ile Thr Met Val Met Thr
 485 490 495
 Gly Met Arg His Phe Lys His
 500

<210> 5698

<211> 131

<212> PRT

<213> S.epidermidis

<400> 5698

Arg Asn Thr Leu Ser Ala Ser Leu Asn Ala Ser Ile Ile Gly Val Asp
 1 5 10 15
 Leu Ser Thr Ile Ser Asn Lys Arg Ser Phe Gly Ile Thr Ile Asn Val
 20 25 30
 Ser Thr Ala Ala Phe Ile Asp Ser Thr Pro Ala Ala Ala Cys Val Trp
 35 40 45
 Arg Leu Arg Pro Ser Lys Pro Asn Gly Arg Val Thr Thr Pro Thr Val
 50 55 60
 Lys Ala Pro Ile Ser Phe Ala Ile Leu Ala Thr Thr Gly Ala Ala Pro
 65 70 75 80
 Val Pro Val Pro Pro Pro Ile Pro Ala Val Thr Asn Thr Ile Ser Ala

				85					90					95			
Pro	Trp	Ile	Ala	Ser	Ser	Ile	Cys	Ser	Leu	Asp	Ser	Ser	Ala	Ala	Phe		
			100					105					110				
Phe	Pro	Ile	Ser	Gly	Leu	Ala	Pro	Ala	Pro	Asn	Pro	Arg	Val	Asn	Phe		
		115					120					125					
Ser	Pro	Ile															
		130															

<210> 5699
 <211> 51
 <212> PRT
 <213> S.epidermidis

Lys	Asp	Thr	Phe	Ser	Lys	Ser	Asp	Ile	Glu	Cys	Arg	Phe	Glu	Tyr	His		
1				5					10					15			
Ile	Gly	Phe	Tyr	Ile	Phe	Thr	Asn	Trp	Thr	Leu	Phe	Ile	Ile	Ala	Ile		
			20					25					30				
Ser	Ala	Phe	Ile	Tyr	Thr	Val	Pro	Ile	Ile	Ser	Ile	Ala	Ser	Lys	Ser		
		35					40					45					
Ser	Cys	Asp															
		50															

<210> 5700
 <211> 312
 <212> PRT
 <213> S.epidermidis

Tyr	Phe	Lys	Leu	Met	Met	Gly	Cys	Leu	Ser	Leu	Phe	Arg	Lys	Gln	Asn		
1				5					10					15			
Leu	Lys	Trp	Leu	Gly	Val	Leu	Ala	Thr	Ile	Ile	Met	Thr	Phe	Val	Gln		
			20					25					30				
Leu	Gly	Gly	Ala	Leu	Val	Thr	Lys	Thr	Gly	Ser	Glu	Asp	Gly	Cys	Gly		
		35					40					45					
Ser	Ser	Trp	Pro	Leu	Cys	Asn	Gly	Ala	Leu	Leu	Pro	Glu	Asn	Leu	Pro		
		50				55					60						
Ile	Gln	Thr	Ile	Ile	Glu	Leu	Ser	His	Arg	Ala	Val	Ser	Ala	Ile	Ser		
65					70				75					80			
Leu	Ile	Val	Val	Leu	Trp	Leu	Val	Ile	Thr	Ala	Trp	Lys	Asn	Ile	Gly		
			85					90					95				
Tyr	Ile	Lys	Glu	Ile	Lys	Pro	Leu	Ser	Ile	Ile	Ser	Val	Gly	Phe	Leu		
			100					105					110				
Leu	Val	Gln	Ala	Leu	Val	Gly	Ala	Ala	Ala	Val	Ile	Trp	Gln	Gln	Asn		
		115					120					125					
Pro	Tyr	Val	Leu	Ala	Leu	His	Phe	Gly	Ile	Ser	Leu	Ile	Ser	Phe	Ser		
		130				135					140						
Ser	Val	Phe	Leu	Met	Thr	Leu	Ile	Ile	Phe	Ser	Ile	Asp	Lys	Lys	Tyr		
145					150				155						160		
Glu	Ala	Asp	Ile	Leu	Phe	Ile	His	Lys	Pro	Leu	Arg	Ile	Leu	Thr	Trp		
			165					170						175			
Leu	Met	Ala	Ile	Ile	Val	Tyr	Leu	Thr	Ile	Tyr	Thr	Gly	Ala	Leu	Val		
			180					185					190				
Arg	His	Thr	Lys	Ser	Ser	Leu	Ala	Tyr	Gly	Ala	Trp	Pro	Ile	Pro	Phe		
		195				200						205					
Asp	Asp	Ile	Val	Pro	His	Asn	Ala	His	Asp	Trp	Val	Gln	Phe	Ser	His		

210		215		220
Arg Gly Met Ala Phe Ile Thr Phe Ile Trp Ile Met Ile Thr Phe Ile				
225		230		235
His Ala Ile Lys Asn Tyr Ser Asp Asn Arg Thr Val Arg Tyr Gly Tyr				240
	245		250	255
Thr Ala Ser Phe Ile Leu Val Ile Leu Gln Val Ile Thr Gly Ala Leu				
	260		265	270
Ser Val Ile Thr Asn Val Asn Leu Ile Ile Ala Leu Phe His Ala Leu				
	275		280	285
Phe Ile Thr Tyr Leu Phe Gly Met Ile Ala Tyr Phe Ile Leu Leu Met				
	290		295	300
Leu Arg Thr Thr Arg Ser Leu Lys				
305		310		

<210> 5701

<211> 216

<212> PRT

<213> S.epidermidis

<400> 5701

Gln Phe Lys Leu Tyr Val Ser Gln Gly Gly Leu Phe Leu Ala Gln Ser				
1	5	10	15	
Lys Asn Glu Phe Tyr Leu Arg Arg Leu His Ser Leu Leu Gly Val Ile		25	30	
	20			
Pro Ile Gly Ala Phe Leu Ile Val His Leu Met Val Asn His Gln Ala		40	45	
	35			
Thr Gln Gly Ala Glu Ala Phe Asn Arg Ala Ser Gly Phe Met Glu Ser		55	60	
	50			
Leu Pro Phe Leu Ile Val Met Glu Phe Ile Leu Ile Tyr Ile Pro Leu		70	75	80
	65			
Leu Tyr His Gly Leu Phe Gly Leu His Ile Ala Phe Thr Ala Lys Glu		85	90	95
	80			
Asn Ile Gly His Tyr Ser Leu Phe Arg Asn Trp Met Phe Phe Phe Gln		100	105	110
	95			
Arg Val Ser Gly Ile Leu Ala Phe Val Phe Ile Ala Met His Leu Trp		115	120	125
	110			
Gln Thr Arg Leu Gln Lys Ala Phe Tyr Gly Lys Ser Val Asp Tyr Asn		130	135	140
	125			
Leu Met His Glu Thr Leu Gln His Pro Leu Trp Ala Ile Phe Tyr Ile		145	150	155
	140			160
Ile Cys Val Ile Ala Val Val Phe His Phe Ala Asn Gly Leu Trp Ser		165	170	175
	160			
Phe Cys Val Thr Trp Gly Phe Leu Gln Ser Lys Lys Ser Gln Arg Val		180	185	190
	175			
Phe Thr Trp Ile Ser Leu Ile Val Phe Leu Val Ile Ser Tyr Ile Gly		195	200	205
	190			
Val Ala Ala Val Ile Ala Phe Ile		210	215	

<210> 5702

<211> 42

<212> PRT

<213> S.epidermidis

<400> 5702

Ile Ile Lys Leu Gln Phe Glu Cys Tyr Phe Ile Asn His Ile Thr Asn

1 5 10 15
 Ala Arg Leu His Phe Arg Leu Lys Phe Arg Ala Phe Val Ile Tyr Asn
 20 25 30
 Leu Leu Lys Thr Asn Leu Val Asn Met Glu
 35 40

<210> 5703

<211> 59

<212> PRT

<213> S.epidermidis

<400> 5703

Ile Ser Thr Ser Leu Ile Lys Gly Phe Cys Phe Lys Phe Leu Ile Ala
 1 5 10 15
 Leu Phe Leu Leu Lys Val Tyr Ile Arg Asp Arg Glu Val Thr Leu Ser
 20 25 30
 Ser Phe Phe Ile Leu Leu Val Leu Thr Leu Leu Leu Pro Leu Thr Phe
 35 40 45
 Thr Phe Asp Ile Leu Leu Ser Gly Val Thr Ile
 50 55

<210> 5704

<211> 394

<212> PRT

<213> S.epidermidis

<400> 5704

Met Leu Glu Phe Glu Gln Gly Phe Asn His Leu Ala Thr Leu Lys Val
 1 5 10 15
 Ile Gly Val Gly Gly Gly Gly Asn Asn Ala Val Asn Arg Met Ile Asp
 20 25 30
 His Gly Met Asn Asn Val Glu Phe Ile Ala Ile Asn Thr Asp Gly Gln
 35 40 45
 Ala Leu Asn Leu Ser Lys Ala Glu Ser Lys Ile Gln Ile Gly Glu Lys
 50 55 60
 Leu Thr Arg Gly Leu Gly Ala Gly Ala Asn Pro Glu Ile Gly Lys Lys
 65 70 75 80
 Ala Ala Glu Glu Ser Arg Glu Gln Ile Glu Asp Ala Ile Gln Gly Ala
 85 90 95
 Asp Met Val Phe Val Thr Ala Gly Met Gly Gly Gly Thr Gly Thr Gly
 100 105 110
 Ala Ala Pro Val Val Ala Lys Ile Ala Lys Glu Met Gly Ala Leu Thr
 115 120 125
 Val Gly Val Val Thr Arg Pro Phe Gly Phe Glu Gly Arg Lys Arg Gln
 130 135 140
 Thr Gln Ala Ala Ala Gly Val Glu Ser Met Lys Ala Ala Val Asp Thr
 145 150 155 160
 Leu Ile Val Ile Pro Asn Asp Arg Leu Leu Asp Ile Val Asp Lys Ser
 165 170 175
 Thr Pro Met Met Glu Ala Phe Lys Glu Ala Asp Asn Val Leu Arg Gln
 180 185 190
 Gly Val Gln Gly Ile Ser Asp Leu Ile Ala Val Ser Gly Glu Val Asn
 195 200 205
 Leu Asp Phe Ala Asp Val Lys Thr Ile Met Ser Asn Gln Gly Ser Ala
 210 215 220
 Leu Met Gly Ile Gly Val Ser Ser Gly Glu Asn Arg Ala Val Glu Ala

225 230 235 240
 Ala Lys Lys Ala Ile Ser Ser Pro Leu Leu Glu Thr Ser Ile Val Gly
 245 250 255
 Ala Gln Gly Val Leu Met Asn Ile Thr Gly Gly Glu Ser Leu Ser Leu
 260 265 270
 Phe Glu Ala Gln Glu Ala Ala Asp Ile Val Gln Asp Ala Ala Asp Glu
 275 280 285
 Asp Val Asn Met Ile Phe Gly Thr Val Ile Asn Pro Glu Leu Gln Asp
 290 295 300
 Glu Ile Val Val Thr Val Ile Ala Thr Gly Phe Glu Asp Lys Pro Ser
 305 310 315 320
 Ser Gln Gly Arg Lys Ala Thr Ser Thr Gly Phe Gly Ser Ser Val Asn
 325 330 335
 Ser Ser Ser Asn His Gln Ser Gly Ala Ser Ala Lys Glu Asp Ser Phe
 340 345 350
 Ser Ala His Thr Ser His Ser Gln Ser Ser Glu Ser Val Asn Glu Arg
 355 360 365
 Ser His Thr Thr Lys Asp Asp Asp Ile Pro Ser Phe Ile Arg Asn Arg
 370 375 380
 Glu Glu Arg Arg Ser Arg Arg Thr Arg Arg
 385 390

<210> 5705

<211> 46

<212> PRT

<213> S.epidermidis

<400> 5705

Lys Asn Tyr Ser Ser Tyr Ser Ser Ser Lys Gln Lys Ile Gln Gln Pro
 1 5 10 15
 His Met Arg Leu Leu Asp Leu Phe Leu Val Phe Tyr Tyr Leu Glu Thr
 20 25 30
 Thr Ser Ser Pro Leu Tyr Glu Pro Gln Phe Leu His Thr Arg
 35 40 45

<210> 5706

<211> 198

<212> PRT

<213> S.epidermidis

<400> 5706

Tyr Thr Tyr Ser Phe Ile Gly Gly Arg Ile Val Thr Asn Ile Ala Ile
 1 5 10 15
 Phe Ala Ser Gly Ser Gly Ser Asn Phe Glu Asn Ile Val Lys His Ile
 20 25 30
 Gln Thr Gly Gln Leu Ser Gly Ile Asn Val Thr Ala Leu Tyr Thr Asp
 35 40 45
 Asn Glu Gly Val Pro Cys Ile Asp Arg Ala Lys Asn Leu Asn Ile Pro
 50 55 60
 Ile His Ile Asn Lys Pro Lys Asp Phe Ser Ser Lys Ser Leu Tyr Glu
 65 70 75 80
 Gln His Leu Leu Lys Leu Leu Ser Ser Glu Glu Val Gln Trp Ile Val
 85 90 95
 Leu Ala Gly Tyr Met Arg Leu Val Gly Gln Asp Leu Leu Gln Ala Tyr
 100 105 110
 Glu Gly Arg Ile Leu Asn Ile His Pro Ser Leu Leu Pro Lys Phe Lys

Leu Glu Leu Leu His Gln Thr Phe Pro Gly Leu Glu Arg Leu Phe Ser
 165 170 175
 Ser Arg Tyr Ser Ile Ile Ala Leu Asn Ile Ala Glu Ile Phe Thr His
 180 185 190
 Pro Asp Met Val Leu Asp Ile Asp Lys Asp Val Leu Ile Thr His Ile
 195 200 205
 Phe Asn Ser Thr Asp Lys Gly Met Ser Met Asp Lys Ala Thr Lys Tyr
 210 215 220
 Ala Leu Gln Leu Arg Val Ile Ala Gln Glu Ser Tyr Pro Asn Val Asp
 225 230 235 240
 Arg His Ser Phe Leu Val Glu Lys Leu Arg Leu Leu Ile Gln Gln Leu
 245 250 255
 Lys Gln Ser Ile His His Leu Lys Gln Leu Asp Asp Ala Met Ile Gln
 260 265 270
 Leu Ala Gln Gln Leu Asp Tyr Phe Glu Asn Ile His Ser Ile Pro Gly
 275 280 285
 Ile Gly Lys Leu Ser Thr Ala Met Ile Ile Gly Glu Ile Gly Asp Ile
 290 295 300
 Lys Arg Phe Lys Ser Asn Lys Gln Leu Asn Ala Phe Val Gly Ile Asp
 305 310 315 320
 Ile Lys Arg Tyr Gln Ser Gly His Thr His Cys Arg Asp Thr Ile Asn
 325 330 335
 Lys Arg Gly Asn Lys Lys Ala Arg Lys Leu Leu Phe Trp Val Ile Met
 340 345 350
 Asn Ile Ile Arg Gly Gln His His Tyr Asp Asn His Val Val Asp Tyr
 355 360 365
 Tyr Tyr Lys Leu Arg Lys Gln Pro Asn Glu Lys Pro His Lys Thr Ala
 370 375 380
 Ile Ile Ala Cys Ile Asn Arg Leu Leu Lys Thr Ile His Tyr Leu Val
 385 390 395 400
 Met Asn His Lys Leu Tyr Asp Tyr Gln Met Ser Pro His
 405 410

<210> 5710

<211> 273

<212> PRT

<213> S.epidermidis

<400> 5710

Lys Glu Leu Ser Thr Met Asp Pro Ser Leu Ile Leu Pro Tyr Leu Trp
 1 5 10 15
 Val Leu Leu Val Leu Val Phe Leu Glu Gly Leu Leu Ala Ala Asp Asn
 20 25 30
 Ala Ile Val Met Ala Val Met Val Lys His Leu Pro Pro Lys Gln Arg
 35 40 45
 Lys Lys Ala Leu Phe Tyr Gly Leu Leu Gly Ala Phe Ile Phe Arg Phe
 50 55 60
 Ile Ala Leu Phe Leu Ile Ser Ile Ile Ala Asn Phe Trp Trp Ile Gln
 65 70 75 80
 Ala Ala Gly Ala Val Tyr Leu Ile Tyr Met Ser Ile Lys Asn Leu Trp
 85 90 95
 Gln Phe Phe His Gln Ser Asn Glu Lys His His Lys Glu Thr Gly Asp
 100 105 110
 Glu His His Phe Asp Glu Thr Gly Asn Glu Lys Glu Val Gly Pro Lys
 115 120 125
 Ser Phe Trp Gly Thr Val Phe Lys Val Glu Phe Ala Asp Ile Ala Phe

Ser Lys Gln Leu Leu Val Met Leu His Gly Phe Ile Ser Asp Ala Thr
 20 25 30
 Thr Tyr His Ser His Ile Glu Arg Leu Val Glu His Thr Asn Val Leu
 35 40 45
 Thr Ile Asp Leu Pro Gly His Gly Leu Asp Thr Ser Ser Met Asp Glu
 50 55 60
 Val Trp Asp Phe Pro Phe Ile Thr Arg Gln Leu Asp Glu Val Leu Ile
 65 70 75 80
 Gln Tyr Gln Thr Tyr Asp Val Phe Leu Leu Gly Tyr Ser Met Gly Gly
 85 90 95
 Arg Val Ala Leu Tyr Tyr Ala Ile His Gly Asn Glu Thr Leu Ser Gly
 100 105 110
 Leu Leu Leu Val Ser Thr Ser Ala Gly Ile Gln Asn Glu Thr Asp Lys
 115 120 125
 Val Glu Arg Ala Gln Val Asp Ala Ala Arg Ala Lys Val Leu Glu Ile
 130 135 140
 Ala Gly Leu Asp Ile Phe Val Asn Asp Trp Glu Lys Leu Pro Leu Phe
 145 150 155 160
 Arg Ser Gln Tyr Asn Leu Ala Pro Glu Ile Arg Gln Ser Ile Arg Asn
 165 170 175
 Asn Arg Leu Asn Gln Asp Ala Asn Lys Leu Ala Lys Ala Leu Arg Asp
 180 185 190
 Tyr Gly Thr Gly His Met Pro Asn Leu Trp Pro His Leu Ser Leu Ile
 195 200 205
 Arg Ile Pro Thr Leu Ile Leu Val Gly Glu Lys Asp Lys Lys Phe Val
 210 215 220
 Gln Ile Gly Gln Gln Leu Glu Asn His Leu Gln Asp Ser His Lys Val
 225 230 235 240
 Gln Ile Ser Asn Val Gly His Thr Ile His Val Glu Asp Ser Thr Glu
 245 250 255
 Phe Asp Thr Ile Ile Leu Gly Phe Leu Lys Glu Glu Gln Asn Asp
 260 265 270

<210> 5714

<211> 55

<212> PRT

<213> S.epidermidis

<400> 5714

Arg Gly Ala Pro Ala Lys Gly Val Gly Arg Glu Ser Gly Ala Arg Val
 1 5 10 15
 Arg Ile Pro Pro Phe Pro Leu Phe Val Tyr Thr Ser Leu Asn Pro Val
 20 25 30
 Lys Gln Asn Val Asp Leu Thr Gly Phe Cys Tyr Ile Leu Leu Ser Ile
 35 40 45
 Val Lys Pro Arg Lys Leu Asn
 50 55

<210> 5715

<211> 274

<212> PRT

<213> S.epidermidis

<400> 5715

Tyr Met Gln Pro Tyr Leu Ile Cys Leu Asp Leu Asp Gly Thr Leu Leu
 1 5 10 15

Asn Asp Asn Lys Glu Ile Ser Pro Tyr Thr Lys Gln Val Leu Thr Glu
 20 25 30
 Leu Gln Gln Cys Gly His Tyr Val Met Ile Ala Thr Gly Arg Pro Tyr
 35 40 45
 Arg Ala Ser Gln Met Tyr Tyr His Glu Leu Asn Met Ser Thr Pro Val
 50 55 60
 Val Asn Phe Asn Gly Ala Phe Val His His Pro Lys Ala Asn Asp Phe
 65 70 75 80
 Lys Val Ile His Glu Val Leu Asp Val Glu Ile Ser Lys Asn Ile Ile
 85 90 95
 Thr Ala Leu Gln Gln Ser His Ile Thr Asn Ile Ile Ala Glu Val Lys
 100 105 110
 Asp Tyr Val Phe Ile Asn Ser Tyr Asp Pro Arg Leu Phe Glu Gly Phe
 115 120 125
 Ser Met Gly Asn Pro Lys Ile Gln Thr Gly Asn Leu Leu Glu Asn Leu
 130 135 140
 Asn Glu Ala Pro Thr Ser Leu Leu Val Glu Ala Glu Glu Glu Asn Ile
 145 150 155 160
 Pro Glu Ile Lys Asp Met Leu Thr His Phe Tyr Ala Glu Asn Ile Glu
 165 170 175
 His Arg Arg Trp Gly Ala Pro Phe Pro Val Ile Glu Ile Val Lys Arg
 180 185 190
 Gly Ile Asn Lys Ala Arg Gly Ile Lys His Val Gln Asn Tyr Leu Asn
 195 200 205
 Ile Ala Asp Asp His Ile Ile Ala Phe Gly Asp Glu Asp Asn Asp Ile
 210 215 220
 Glu Met Ile Lys Phe Ala Thr His Gly Ile Ala Met Ala Asn Gly Leu
 225 230 235 240
 Lys Asp Leu Lys Glu Ile Ala Asn Glu Thr Lys Phe Ser Asn Asn Glu
 245 250 255
 Asp Gly Ile Gly Arg Tyr Leu Asn Asp Phe Phe Asn Leu Lys Met Arg
 260 265 270
 Tyr Tyr

<210> 5716

<211> 373

<212> PRT

<213> S.epidermidis

<400> 5716

Cys Ile Arg Pro Lys Asn Ala Lys Ile Lys Glu Val Lys Val Met Thr
 1 5 10 15
 Glu Thr Val Leu Glu Val Asn Asp Leu His Val Ser Phe Asp Ile Ala
 20 25 30
 Ala Gly Glu Val Gln Ala Val Arg Gly Val Asp Phe His Leu Asn Lys
 35 40 45
 Gly Glu Thr Leu Ala Ile Val Gly Glu Ser Gly Ser Gly Lys Ser Val
 50 55 60
 Thr Thr Lys Ala Ile Thr Lys Leu Phe Gln Lys Asp Thr Gly Arg Ile
 65 70 75 80
 Lys Lys Gly Glu Ile Leu Phe Leu Gly Glu Asp Leu Ala Gln Lys Ser
 85 90 95
 Glu Lys Glu Leu Ile Gln Leu Arg Gly Arg Asp Ile Ser Met Ile Phe
 100 105 110
 Gln Asp Pro Met Thr Ser Leu Asn Pro Thr Met Gln Ile Gly Lys Gln

```

      115              120              125
Val Met Glu Pro Leu Ile Lys His Lys Lys Leu Ser Lys Ala Lys Ala
      130              135              140
Lys Gln Arg Ala Leu Glu Ile Leu Asn Leu Val Gly Leu Pro Arg Ala
      145              150              155              160
Glu Lys Arg Phe Lys Ala Tyr Pro His Gln Phe Ser Gly Gly Gln Arg
      165              170              175
Gln Arg Ile Val Ile Ala Ile Ala Leu Ala Cys Glu Pro Lys Ile Leu
      180              185              190
Ile Ala Asp Glu Pro Thr Thr Ala Leu Asp Val Thr Met Gln Ala Gln
      195              200              205
Ile Leu Asp Leu Met Lys Glu Leu Gln Asn Lys Ile Glu Thr Ser Ile
      210              215              220
Ile Phe Ile Thr His Asp Leu Gly Val Val Ala Asn Ile Ala Asp Lys
      225              230              235              240
Val Ala Val Met Tyr Gly Gly Gln Met Val Glu Thr Gly Asp Val Asn
      245              250              255
Glu Ile Phe Tyr Asp Pro Lys His Pro Tyr Thr Trp Gly Leu Leu Ser
      260              265              270
Ser Met Pro Asp Leu Thr Thr Ser Asn Asp Thr Asp Leu Ile Ala Ile
      275              280              285
Pro Gly Thr Pro Pro Asp Leu Leu His Pro Pro Ile Gly Asp Ala Phe
      290              295              300
Ala Arg Arg Ser Arg Tyr Ala Leu Asp Ile Asp Phe Lys Glu Glu Pro
      305              310              315              320
Pro Trp Phe Lys Ile Ser Pro Thr His Phe Val Lys Ser Trp Leu Leu
      325              330              335
Asp Ala Arg Ala Pro Lys Val Thr Pro Pro Ser Met Val Gln Lys Arg
      340              345              350
Leu Arg Thr Met Pro Ser Asn Tyr Glu Gln Pro His Arg Val Glu Arg
      355              360              365
Val Ala Phe Asn Glu
      370

```

<210> 5717

<211> 79

<212> PRT

<213> S.epidermidis

<400> 5717

```

Ile Lys Lys Pro Val Asn Glu Phe Met Lys Thr His Leu Leu Ser Ile
1              5              10              15
Leu Ile Gly Ile Met Ser Gln Ala His Arg Ser Val Glu Lys Pro Ser
      20              25              30
Val Leu Ser Leu Ile Leu Leu Arg Gly Asp Asn Asn Lys His Thr His
      35              40              45
Leu Phe Val Glu Phe Glu Glu Phe Asp Arg Ala Asn Glu Glu Lys His
      50              55              60
Ala Lys Val Glu Tyr His Ser Ser Lys Asn Lys Thr Asp Thr Leu
      65              70              75

```

<210> 5718

<211> 42

<212> PRT

<213> S.epidermidis

<400> 5718

Val Tyr Tyr Thr Arg Phe Ile Ile Val Asp Lys Phe Ile Ile Ile Ser
 1 5 10 15
 Leu Ile Asn Leu Phe Leu Ile Ile Ile Asp Val Ile Tyr Pro Asn His
 20 25 30
 Val Leu Leu Asp Ser Asp Lys Ile Ile His
 35 40

<210> 5719

<211> 79

<212> PRT

<213> S.epidermidis

<400> 5719

Asn Asn His Thr Glu Val Asp Ile Met Lys Val Asn Lys Thr Ile Tyr
 1 5 10 15
 Ile Ile Val Ala Leu Ile Leu Gly Gly Leu Gly Val His Lys Phe Tyr
 20 25 30
 Ala Asp Gln Val Gly Gln Gly Ile Leu His Leu Val Phe Phe Trp Thr
 35 40 45
 Gly Ile Pro Ser Val Val Ala Ile Ile His Ala Ile Ile Val Ile Phe
 50 55 60
 Thr Lys Lys Ala Asp Glu Tyr Gly Tyr Ile Thr Phe Asp Lys Lys
 65 70 75

<210> 5720

<211> 206

<212> PRT

<213> S.epidermidis

<400> 5720

Ser Arg Arg Leu Ile Lys Met Lys Asn Val Ser Lys Ala Leu Ile Trp
 1 5 10 15
 Phe Val Ile Ser Phe Ile Ile Phe His Ala Ile Leu Phe Val Met Trp
 20 25 30
 Gly Glu His Gln Glu Tyr Trp Tyr Leu Tyr Thr Gly Ile Met Leu Ile
 35 40 45
 Ala Gly Ile Ser Tyr Val Phe Tyr Gln Arg Asp Ile Ala Ser Lys Arg
 50 55 60
 Leu Leu Thr Ser Ile Gly Met Gly Ile Ile Thr Ser Val Ala Leu Ile
 65 70 75 80
 Ile Ile Gln Leu Ile Phe Ser Leu Ile Ser Ser Glu Leu Ser Tyr Ala
 85 90 95
 Ser Leu Ile Lys Glu Leu Ser Arg Thr Gly Val Tyr Phe Lys Trp Gln
 100 105 110
 Met Leu Val Thr Leu Leu Phe Val Ile Pro Cys His Glu Leu Tyr Met
 115 120 125
 Arg Thr Val Leu Gln Lys Glu Leu Ile Lys Tyr Asn Leu Pro Lys Trp
 130 135 140
 Ala Ser Ile Leu Ile Val Ala Ile Cys Ser Ser Leu Phe Ile Tyr
 145 150 155 160
 Leu Asp Asn Trp Trp Ile Val Phe Phe Ile Phe Val Ala Gln Phe Ile
 165 170 175
 Leu Ser Leu Ser Tyr Glu Tyr Thr Arg Arg Ile Ala Thr Thr Thr Ile
 180 185 190
 Gly Gln Ile Val Ala Ile Ile Leu Leu Leu Ile Phe His Gly

195

200

205

<210> 5721

<211> 573

<212> PRT

<213> S.epidermidis

<400> 5721

Thr	Lys	Leu	Thr	Arg	Cys	Leu	Met	Tyr	Lys	Asp	Tyr	Asn	Met	Thr	Gln
1				5					10					15	
Leu	Thr	Leu	Pro	Met	Glu	Thr	Ser	Val	Leu	Ile	Pro	Thr	Asn	Asp	Ile
			20					25					30		
Ser	Arg	His	Val	Asn	Asp	Ile	Val	Glu	Thr	Ile	Pro	Glu	Thr	Glu	Phe
		35					40					45			
Asp	Glu	Phe	Arg	His	His	Arg	Gly	Ala	Thr	Ser	Tyr	His	Pro	Lys	Met
	50					55					60				
Met	Leu	Lys	Val	Val	Leu	Tyr	Ala	Tyr	Thr	Gln	Ser	Val	Phe	Ser	Gly
65					70					75					80
Arg	Lys	Ile	Glu	Lys	Leu	Leu	Asn	Asp	Ser	Ile	Arg	Met	Met	Trp	Leu
				85				90						95	
Ser	Gln	Asn	Gln	Lys	Pro	Ser	Tyr	Lys	Thr	Ile	Asn	Arg	Phe	Arg	Val
			100					105					110		
Asn	Pro	Lys	Val	Asp	Ala	Leu	Leu	Glu	Ser	Leu	Phe	Ile	Gln	Phe	His
		115					120					125			
Ser	Gln	Cys	Leu	Lys	Gln	Asn	Leu	Ile	Asp	Asp	Gln	Ala	Ile	Phe	Ile
	130					135					140				
Asp	Gly	Thr	Lys	Val	Glu	Ala	Asn	Ala	Asn	Arg	Tyr	Thr	Phe	Val	Trp
145					150					155					160
Lys	Lys	Ser	Ile	Gln	Asn	His	Glu	Ser	Arg	Met	Asn	Glu	Asn	Ser	Lys
				165				170						175	
Ala	Leu	Tyr	His	Glu	Leu	Val	Ile	Asn	Lys	Ile	Ile	Pro	Glu	Ile	Lys
			180					185					190		
Lys	Asp	His	Asp	Asn	Asp	Leu	Thr	Lys	Glu	Glu	Ile	Asp	Leu	Ile	Gly
		195					200					205			
Ser	His	Leu	Asp	Lys	Glu	Ile	Glu	Asp	Leu	Asn	Gln	His	Ile	Asp	Asn
	210					215					220				
Glu	Lys	Cys	Thr	Lys	Ile	Arg	Lys	Gln	Ile	Arg	Leu	Lys	Arg	Thr	Lys
225					230					235					240
Ile	Lys	Lys	Tyr	Lys	Lys	Gln	Ile	Asn	Asp	Tyr	Ser	Gln	Arg	Lys	His
				245					250					255	
Lys	Tyr	Glu	Val	Gln	Lys	Ser	Ile	Leu	Lys	Asp	Arg	Asn	Ser	Tyr	Ser
			260					265					270		
Lys	Thr	Asp	His	Asp	Ala	Thr	Phe	Met	Arg	Met	Lys	Glu	Asp	His	Met
		275					280					285			
Lys	Asn	Gly	Gln	Leu	Lys	Pro	Gly	Tyr	Asn	Leu	Gln	Ile	Ala	Thr	Asn
	290					295					300				
Ser	Gln	Phe	Val	Leu	Phe	Tyr	Asp	Val	Tyr	Gln	Asn	Pro	Thr	Asp	Thr
305					310					315					320
Arg	Thr	Met	Ile	Pro	Phe	Leu	Asn	Thr	Ile	Gln	Glu	Thr	Tyr	Gly	His
				325					330					335	
Leu	Pro	Glu	Tyr	Ile	Val	Ala	Asp	Ala	Gly	Tyr	Gly	Ser	Glu	Ala	Asn
			340					345					350		
Tyr	Met	Ala	Ile	Ile	Asp	Asn	Phe	Asn	Arg	Thr	Pro	Leu	Ile	Thr	Tyr
		355					360					365			
Gly	Met	Phe	Ile	Lys	Asp	Lys	Thr	Lys	Lys	Tyr	Lys	Ser	Asp	Ile	Phe
	370					375					380				

Ser Asp Val Leu Val Val Ile Gly Ile Gly Gly Ser Tyr Leu Gly Ala
 85 90 95
 Arg Ala Ala Ile Glu Met Leu Thr Ser Ser Phe Arg Thr Asn Thr Glu
 100 105 110
 Tyr Pro Glu Ile Val Phe Val Gly Asn His Leu Ser Ser Ser Tyr Thr
 115 120 125
 Lys Glu Leu Leu Asp Tyr Leu Gln Gly Lys Asp Phe Ser Val Asn Val
 130 135 140
 Ile Ser Lys Ser Gly Thr Thr Thr Glu Pro Ala Val Ala Phe Arg Leu
 145 150 155 160
 Phe Lys Gln Leu Val Glu Glu Lys Tyr Gly Lys Asp Glu Ala Lys Lys
 165 170 175
 Arg Ile Tyr Ala Thr Thr Asp Lys Ser Lys Gly Ala Leu Lys Gln Leu
 180 185 190
 Ala Asp Asn Glu Gly Tyr Glu Thr Phe Val Val Pro Asp Asp Val Gly
 195 200 205
 Gly Arg Tyr Ser Val Leu Thr Ala Val Gly Leu Leu Pro Ile Ala Thr
 210 215 220
 Ala Gly Ile Asn Ile Glu Ser Ile Met Ile Gly Ala Ala Lys Ala Arg
 225 230 235 240
 Glu Glu Leu Ser Ser Asp Asp Leu Asp Gln Asn Ile Ala Tyr Gln Tyr
 245 250 255
 Ala Thr Ile Arg Asn Ile Leu Tyr Ser Lys Gly Tyr Thr Thr Glu Met
 260 265 270
 Leu Ile Asn Tyr Glu Pro Ser Met Gln Tyr Phe Asn Glu Trp Trp Lys
 275 280 285
 Gln Leu Tyr Gly Glu Ser Glu Gly Lys Asp Phe Lys Gly Ile Tyr Pro
 290 295 300
 Ser Ser Ala Asn Tyr Thr Thr Asp Leu His Ser Leu Gly Gln Tyr Val
 305 310 315 320
 Gln Glu Gly Arg Arg Phe Leu Phe Glu Thr Val Val Lys Val Asn His
 325 330 335
 Pro Lys His Asp Ile Lys Ile Glu Glu Asp Ala Asp Asp Leu Asp Gly
 340 345 350
 Leu Asn Tyr Leu Ala Gly Lys Ser Ile Asp Glu Val Asn Thr Lys Ala
 355 360 365
 Phe Glu Gly Thr Leu Leu Ala His Thr Asp Gly Gly Val Pro Asn Ile
 370 375 380
 Val Val Asn Ile Pro Gln Leu Asp Glu Glu Thr Phe Gly Tyr Val Val
 385 390 395 400
 Tyr Phe Phe Glu Leu Ala Cys Ala Met Ser Gly Tyr Gln Leu Gly Val
 405 410 415
 Asn Pro Phe Asn Gln Pro Gly Val Glu Ala Tyr Lys Gln Asn Met Phe
 420 425 430
 Ala Leu Leu Gly Lys Pro Gly Phe Glu Asp Lys Lys Lys Glu Leu Glu
 435 440 445
 Asn Arg Leu
 450

<210> 5724

<211> 41

<212> PRT

<213> S.epidermidis

<400> 5724

Asn Glu Lys Thr Ser Met Lys Leu Ile Cys Ile Arg Ala Cys Tyr Lys

2423

1		5		10		15									
Phe	Lys	Ser	Ile	Ile	Ser	Ile	Asp	Thr	Ile	Val	Leu	Thr	Leu	Gln	Gly
		20				25							30		
Ser	Ile	Gly	Leu	Cys	Arg	Ser	Leu	Lys							
		35					40								

<210> 5725
 <211> 55
 <212> PRT
 <213> S.epidermidis

<400> 5725
Thr Leu Glu Thr Leu Tyr Gln Thr Val Lys Ile Glu Glu Leu Asp Glu
1 5 10 15
Phe Ile Phe Ile Ile Phe Asn Gln Leu Phe Ser His Pro Arg Phe Phe
20 25 30
Gln Tyr Lys Asn Val Glu His His Asn Lys Lys Phe Tyr Thr Ser Lys
35 40 45
Asp Leu Ala Leu Ser Val Ile
50 55

<210> 5726
 <211> 54
 <212> PRT
 <213> S.epidermidis

<400> 5726
Lys Leu Met Thr Val Phe Gln Phe Lys Ile Cys Gly Thr Leu Ile Leu
1 5 10 15
Asn Lys Cys Lys Cys Ser Val Tyr Phe Asn Ile Thr Leu Glu Lys
20 25 30
Phe Asn Lys Ile Asp Ile Ile Ile Leu Val Leu Asp Arg Asp Arg Leu
35 40 45
Ile Ile Ile Tyr Pro Gln
50

<210> 5727
 <211> 44
 <212> PRT
 <213> S.epidermidis

<400> 5727
Leu Thr Lys Thr Lys Leu Leu Glu Arg Tyr Arg Ser Asp Ile Gly Leu
1 5 10 15
Ser Val Asn Leu Asn Leu Thr Leu Ile Gln Ile Thr Leu Lys Ile Lys
20 25 30
Tyr Gln Ser Thr Leu Glu Ile Ser Ile His Ala Phe
35 40

<210> 5728
 <211> 340
 <212> PRT
 <213> S.epidermidis

<400> 5728
Lys Arg Arg Ala Phe Met Thr Ala Ile Lys Asp Arg Asp Tyr Phe Phe

Sequence = E05723

1 5 10 15
 Asp Asn Ala Arg Ala Ile Leu Ile Phe Leu Val Val Leu Gly His Leu
 20 25 30
 Leu Gln Pro Tyr Thr Ser Glu Asp Lys Phe Leu Gln Ala Leu Tyr Leu
 35 40 45
 Leu Ile Tyr Ser Phe His Met Pro Thr Phe Leu Phe Ile Ser Gly Tyr
 50 55 60
 Phe Ala Lys Asn Leu Asp Lys Pro Asn Tyr Leu Glu Lys Ile Ala Lys
 65 70 75 80
 Lys Leu Leu Leu Pro Tyr Val Ile Phe Phe Ala Phe Phe Ser Leu Tyr
 85 90 95
 Tyr Tyr Phe Thr Gly Lys Glu Asp Ala Ile Gln Leu Asp Pro Phe Asn
 100 105 110
 Pro Val Phe Ala Leu Trp Phe Leu Thr Leu Phe Phe His Val
 115 120 125
 Val Leu Val Ile Val Arg Arg Tyr Asn Pro Tyr Ile Val Leu Phe Ile
 130 135 140
 Ser Ile Leu Val Ser Val Leu Ala Gly Phe Ser Gly Asn Ile Asp Ser
 145 150 155 160
 Tyr Met Ser Ile Ser Arg Thr Ile Val Phe Phe Pro Ile Phe Phe Ile
 165 170 175
 Gly His Leu Val Thr Gln Ser His Thr Glu Lys Leu Arg Asn Lys Lys
 180 185 190
 Trp Ile Pro Ile Ser Ile Ile Ile Leu Ile Thr Phe Phe Ile Gly Tyr
 195 200 205
 Thr Ile His Pro Ile Asn Gly Asp Trp Leu Leu Gly Ser Thr Pro Tyr
 210 215 220
 Thr Ser Leu Glu Ser Asn Gly Glu Asp Val Tyr Ser Pro Leu Lys Arg
 225 230 235 240
 Leu Leu Leu Tyr Ile Ile Ile Leu Leu Thr Met Cys Ala Phe Leu Asn
 245 250 255
 Leu Met Pro Gln Thr Lys Arg Ile Tyr Thr Tyr Ile Gly Gln Arg Thr
 260 265 270
 Met Phe Val Tyr Leu Leu His Gly Ile Val Ile Gly Val Ile Arg Gly
 275 280 285
 Phe Asp Leu Tyr Pro Phe Lys Asp Gln Ile Ser Ile Phe Thr Tyr Leu
 290 295 300
 Tyr Leu Phe Ile Ser Ala Ser Val Ile Val Leu Ile Leu Ser Ser Lys
 305 310 315 320
 Trp Val Cys Lys Trp Thr Asn Pro Phe Ile Asn Leu Lys Arg Pro Ser
 325 330 335
 Gln Phe Lys Asn
 340

<210> 5729

<211> 267

<212> PRT

<213> S.epidermidis

<400> 5729

Lys Tyr Met Ala Glu Glu Leu Arg Ile Met Glu Asn Lys Ser Arg Glu
 1 5 10 15
 Asp Thr Asn Leu Ser Pro Val Ser Lys Ile Glu Ile Tyr Ser Phe Phe
 20 25 30
 Asp Pro Phe Ser Lys Asp Cys Phe Lys Leu Ser Ala Ile Leu Ser Lys
 35 40 45

Leu Arg Ile Glu Tyr Asn Lys Tyr Ile Lys Ile Arg His Ile Leu Asn
 50 55 60
 Pro Ser Leu Lys Val Leu Thr Lys Cys Gln Ala Gln Ser Thr Ser Asp
 65 70 75 80
 Phe Asp Asn Ile Ala Leu Ala Tyr Lys Ala Ala Glu Leu Gln Gly Arg
 85 90 95
 Ile Arg Ala Glu Arg Phe Ile His Leu Met Gln Asn Glu Ile Ile Pro
 100 105 110
 Lys Arg Asp Ile Ile Thr Glu Asp Met Ile Ser Asp Cys Ile Asn Asn
 115 120 125
 Ala Gly Ile Asp Tyr Gln Val Phe Lys Glu Asp Leu Gln Lys Asp Lys
 130 135 140
 Leu Thr Asp Ser Leu Lys Val Asp Leu His Ile Ala Arg Glu Met Glu
 145 150 155 160
 Ile Glu Gln Ala Pro Ser Leu Val Phe Phe Ser Glu Asn Val His Glu
 165 170 175
 Glu Gly Leu Lys Val Glu Gly Leu Tyr Pro Tyr His Ile Tyr Thr Tyr
 180 185 190
 Ile Ile Asn Glu Leu Met Gly Gln Pro Ile Glu Lys Asn Leu Pro Pro
 195 200 205
 Lys Leu Glu Tyr Tyr Ile Gln Lys Lys Gln Leu Val Thr Met Glu Glu
 210 215 220
 Leu Leu Thr Ile Tyr Glu Trp Pro Glu Lys Leu Leu Asn Lys Glu Leu
 225 230 235 240
 Lys Lys Leu Thr Leu Gln Gln Lys Val Glu Lys Leu Gln Tyr Pro Glu
 245 250 255
 Gly Glu Phe Trp Lys Ser Lys Met Pro Gln Cys
 260 265

<210> 5730

<211> 75

<212> PRT

<213> S.epidermidis

<400> 5730

Ala Leu Asn Phe Val Arg Lys Gly Asp Arg Phe Val Val Glu Ser Ile
 1 5 10 15
 Asp Arg Leu Gly Arg Asn Tyr Asp Glu Val Ile His Thr Val Asn Tyr
 20 25 30
 Leu Lys Asp Lys Glu Val Gln Leu Met Ile Thr Ser Phe Pro Arg Met
 35 40 45
 Asp Glu Val Ile Gly Lys Pro Leu Leu Tyr Ile Glu Ser His Ala Leu
 50 55 60
 Cys Val Trp Phe Arg Lys Gly Phe Thr Val Ile
 65 70 75

<210> 5731

<211> 46

<212> PRT

<213> S.epidermidis

<400> 5731

Ile Gln Asn Phe Phe Glu Gln Ala Lys Glu Phe Leu Glu Gln Glu Tyr
 1 5 10 15
 Gly Lys Asp Asn Leu Leu Tyr Ala Lys Leu His Met Asp Lys Arg Leu
 20 25 30

Thr Cys Thr Leu Lys Leu Tyr Gln Leu Gln Lys Met Asp Asp
 35 40 45

<210> 5732

<211> 41

<212> PRT

<213> S.epidermidis

<400> 5732

Leu Val Phe Tyr Cys Tyr Pro Leu Glu Asp His Ser Tyr Ser Phe Phe
 1 5 10 15
 Asn Ser Phe Phe Ile Cys Lys Ile Gln Val Ile Leu Ile Leu Tyr Ile
 20 25 30
 Ile Ile Ile Leu Asn Ser Phe Ile Ile
 35 40

<210> 5733

<211> 123

<212> PRT

<213> S.epidermidis

<400> 5733

Glu Ala Leu Tyr Phe Gly Ala Thr Gly Val Leu Ser Tyr Arg Lys Phe
 1 5 10 15
 Phe Pro Phe Ile Tyr Asn Leu Phe Gln Lys Gly Tyr Phe Glu Asn Ser
 20 25 30
 Leu Thr Ile Ile Gly Ser Gly Leu Asn Glu Leu Thr Thr Asp Glu Phe
 35 40 45
 Arg Glu Lys Val Lys Asn Ala Ile Gln Asn Asn Ile Glu Asn Ser Lys
 50 55 60
 Glu Ile Gly Ala Phe Leu Lys Arg Leu Phe Tyr Lys Gln Gln Asp Ala
 65 70 75 80
 Asn Ser Lys Asp Ser Tyr Gln Lys Phe Leu Glu Met Ser Leu Glu Leu
 85 90 95
 Asp Asp Lys Phe Asp Leu Lys Glu Asn Arg Leu Phe Tyr Leu Ala Met
 100 105 110
 Ser Pro Lys Phe Leu Glu Leu Gln Gln Thr Thr
 115 120

<210> 5734

<211> 52

<212> PRT

<213> S.epidermidis

<400> 5734

Val Thr Ile Tyr Ser His Pro Pro Leu Ile Phe Lys Ile Tyr Asn Asn
 1 5 10 15
 Cys Asn Val Phe Ser Cys Ile Val Lys Gly Lys Glu Val Tyr His Leu
 20 25 30
 Leu Tyr Leu Asn Thr Ile Asn Lys Ala Tyr Asn Thr Met Leu Cys Arg
 35 40 45
 Lys Phe Ala Leu
 50

<210> 5735

<211> 301

<213> S.epidermidis

Met	Lys	Phe	Leu	Ser	Phe	Lys	His	Asn	Asp	Arg	Thr	Ser	Tyr	Gly	Val
1				5					10					15	
Lys	Val	Lys	Arg	Glu	Asp	Ala	Val	Trp	Asp	Leu	Pro	Met	Val	Phe	Ala
			20					25					30		
Glu	Phe	Gly	Asp	Lys	Asp	Phe	Asn	Pro	Lys	Thr	Leu	Ile	Ala	Gly	Leu
		35					40					45			
Gln	Gln	Asn	Gln	Thr	Leu	Asp	Phe	Gln	Glu	Gln	Val	Arg	Lys	Ala	Val
	50					55					60				
Val	Ala	Ala	Glu	Glu	Ser	Gly	Arg	Asp	Glu	Glu	Phe	Lys	Leu	Leu	Phe
65					70					75					80
Thr	Asp	Ile	Asp	Phe	Leu	Pro	Pro	Val	Thr	Pro	Pro	Asn	Asn	Val	Ile
				85					90					95	
Ala	Phe	Gly	Arg	Asn	Tyr	Glu	Asp	His	Ala	Ser	Glu	Leu	Asn	His	Glu
			100				105					110			
Val	Asp	Ser	Leu	Tyr	Val	Phe	Thr	Lys	Ala	Ala	Ser	Ser	Leu	Thr	Gly
		115					120					125			
Asp	Glu	Ala	Thr	Ile	Pro	Asn	His	Lys	Asp	Ile	Thr	Glu	Gln	Leu	Asp
	130					135					140				
Tyr	Glu	Gly	Glu	Leu	Gly	Ile	Val	Ile	Gly	Lys	Ser	Gly	Glu	Lys	Ile
145					150					155					160
Pro	Arg	Gly	Leu	Ala	Leu	Asp	Tyr	Ile	Tyr	Gly	Tyr	Thr	Ile	Ile	Asn
				165					170					175	
Asp	Ile	Thr	Asp	Arg	Thr	Ala	Gln	Ser	Ser	His	Asp	Gln	Ala	Phe	Leu
			180					185					190		
Ser	Lys	Ser	Leu	Thr	Gly	Ala	Cys	Pro	Met	Gly	Pro	Tyr	Ile	Val	Thr
		195					200					205			
Lys	Asp	Glu	Leu	Pro	Ala	Pro	Glu	Asn	Val	Asn	Ile	Val	Thr	Lys	Val
	210					215					220				
Asn	Asn	Glu	Ile	Arg	Gln	Asp	Gly	Asn	Thr	Gly	Glu	Met	Ile	Leu	Lys
225					230					235					240
Ile	Asp	Glu	Leu	Ile	Glu	Lys	Ile	Ser	Lys	Tyr	Val	Ala	Leu	His	Pro
				245					250					255	
Gly	Asp	Ile	Ile	Ala	Thr	Gly	Thr	Pro	Ala	Gly	Val	Gly	Ala	Gly	Leu
			260					265				270			
Gln	Pro	Pro	Gln	Phe	Leu	Gln	Pro	Gly	Asp	Glu	Val	Lys	Val	Thr	Ile
		275					280					285			
Asp	Asn	Ile	Gly	Thr	Leu	Thr	Thr	Tyr	Ile	Ser	Lys	Asn			
	290					295					300				

<211> 81

<213> S.epidermidis

Arg	Ala	Ser	Tyr	Ser	Val	Glu	Thr	Lys	Tyr	Lys	Ala	Val	Glu	Met	Lys
1				5					10					15	
Ala	Ala	Glu	Phe	Ser	Thr	Lys	Glu	Ile	Met	Lys	Glu	Leu	Asn	Ile	Arg
			20					25					30		
Asn	Arg	Thr	Gln	Val	Lys	Ser	Trp	Trp	Leu	Trp	Tyr	Gln	Asn	Glu	Glu
		35					40					45			
Ser	Met	Phe	Val	Leu	Tyr	Leu	Tyr	Pro	Gln	Ser	Leu	Ile	Ile	Cys	Leu

50 55 60
 Ser Leu His Phe Ser Thr Asn Gln Cys Tyr Asn Leu Asp Asn Glu Asn
 65 70 75 80
 Asp

<210> 5737
 <211> 270
 <212> PRT
 <213> S.epidermidis

<400> 5737
 Ile Met Arg Tyr Thr Ile Leu Thr Lys Gly Asp Ser Lys Ser Asn Ala
 1 5 10 15
 Leu Lys His Lys Met Ile Asn His Met Lys Asp Phe Gln Met Val Glu
 20 25 30
 Asp Ser Glu Asn Pro Glu Ile Val Ile Ser Val Gly Gly Asp Gly Thr
 35 40 45
 Leu Leu Gln Ala Phe His Gln Tyr Ser His Met Leu Ser Lys Val Ala
 50 55 60
 Phe Val Gly Ile His Thr Gly His Leu Gly Phe Tyr Ala Asp Trp Leu
 65 70 75 80
 Pro His Glu Val Glu Lys Leu Ile Ile Glu Ile Asn Asn Ser Glu Phe
 85 90 95
 Gln Val Ile Glu Tyr Pro Leu Leu Glu Leu Ile Val Arg Tyr Asn Asp
 100 105 110
 Asn Gly Tyr Glu Thr Arg Tyr Leu Ala Leu Asn Glu Ala Thr Met Lys
 115 120 125
 Thr Glu Asn Gly Ser Thr Leu Val Val Asp Val Asn Ile Arg Gly Lys
 130 135 140
 His Phe Glu Arg Phe Arg Gly Asp Gly Leu Cys Ile Ser Thr Pro Ser
 145 150 155 160
 Gly Ser Thr Ala Tyr Asn Lys Ala Leu Gly Gly Ala Leu Ile His Pro
 165 170 175
 Ser Leu Glu Ala Met Gln Ile Ala Glu Ile Ala Ser Ile Asn Asn Arg
 180 185 190
 Val Phe Arg Thr Val Gly Ser Pro Leu Val Leu Pro Lys His His Thr
 195 200 205
 Cys Leu Ile Thr Pro Val Asn His Asp Thr Ile Arg Thr Thr Ile Asp
 210 215 220
 His Val Ser Ile Lys His Lys Asn Val Asn Ala Ile Gln Tyr Arg Val
 225 230 235 240
 Ala Asn Glu Lys Val Arg Phe Ala Arg Phe Arg Pro Phe Pro Phe Trp
 245 250 255
 Lys Arg Val His Asp Ser Phe Ile Ser Ser Asp Asp Glu Arg
 260 265 270

<210> 5738
 <211> 333
 <212> PRT
 <213> S.epidermidis

<400> 5738
 Lys His Glu Tyr Val Lys Leu Ile Pro Gly Ile Lys Asn Phe Leu Arg
 1 5 10 15
 Arg Cys Thr Thr Met Asn Val Gly Ile Lys Gly Phe Gly Ala Tyr Ala


```

      20      25      30
Pro Lys Asn Ile Ile Asp Asn Ala Tyr Phe Glu Gln Phe Leu Glu Thr
      35      40      45
Ser Asp Glu Trp Ile Ser Lys Met Thr Gly Ile Lys Glu Arg His Trp
      50      55      60
Ala Asp Glu Asp Gln Asp Thr Ser Asp Leu Ala Tyr Asn Ala Ser Ile
      65      70      75      80
Lys Ala Ile Glu Asp Ala Gly Ile Gln Pro Val Asp Ile Asp Met Ile
      85      90      95
Ile Val Ala Thr Ala Thr Gly Asp Met Pro Phe Pro Ser Val Ala Asn
      100      105      110
Ile Leu Gln Glu Arg Leu Gly Thr Gly Lys Val Ala Thr Met Asp Gln
      115      120      125
Leu Ala Ala Cys Ser Gly Phe Met Tyr Ser Met Ile Thr Ala Lys Gln
      130      135      140
Tyr Ile Gln Ser Gly Asp Tyr Lys His Ile Leu Val Val Gly Ala Asp
      145      150      155      160
Lys Leu Ser Lys Ile Thr Asp Met Thr Asp Arg Ser Thr Ala Val Leu
      165      170      175
Phe Gly Asp Gly Ala Gly Ala Val Val Met Gly Glu Val Ala Glu Gly
      180      185      190
Arg Gly Ile Ile Ser Tyr Glu Met Gly Ser Asp Gly Ser Gly Gly Lys
      195      200      205
Tyr Leu Tyr Leu Asp Arg Glu Thr Gly Lys Leu Lys Met Asn Gly Arg
      210      215      220
Glu Val Phe Lys Phe Ala Val Arg Ile Met Gly Asp Ala Ser Thr Arg
      225      230      235      240
Val Val Glu Lys Ala Gly Leu Ser Ser Glu Asp Ile Asp Leu Phe Val
      245      250      255
Pro His Gln Ala Asn Ile Arg Ile Met Glu Ser Ala Arg Glu Arg Leu
      260      265      270
Gly Ile Glu Arg Glu Lys Met Ser Val Ser Val Asn Lys Tyr Gly Asn
      275      280      285
Thr Ser Ala Ala Ser Ile Pro Leu Ser Ile Asn Gln Glu Leu Gln Asn
      290      295      300
Gly Lys Ile Lys Asp Asp Asp Thr Leu Val Leu Val Gly Phe Gly Gly
      305      310      315      320
Gly Leu Thr Trp Gly Ala Ile Val Ile Lys Trp Gly Lys
      325      330

```

<210> 5739

<211> 41

<212> PRT

<213> S.epidermidis

<400> 5739

```

Ile Thr Arg Tyr Asn Lys Thr Pro Ser Asn Gln Arg Phe Val Leu Arg
1      5      10      15
Asp Leu Thr Arg Tyr Lys Gln Ile Thr Glu Thr Glu Gly Phe Glu Pro
      20      25      30
Ser Arg Arg Ser Arg Asp Leu His Pro
      35      40

```

<210> 5740

<211> 141

<212> PRT

<213> S.epidermidis

<400> 5740

Asn	Asn	Met	Tyr	Lys	Gln	Leu	Glu	Lys	Leu	Ile	Thr	Leu	Thr	Asn	Asn		
1				5					10					15			
Asp	Leu	Asn	Leu	Val	Asn	Arg	Arg	Phe	Gly	Gln	Arg	Thr	Asp	Ile	Thr		
			20					25					30				
Ser	Glu	Gln	Leu	Glu	Leu	Leu	Arg	Ile	Leu	Tyr	Asn	Tyr	Asp	Arg	Leu		
		35					40					45					
Ser	Gln	Tyr	Asp	Leu	Thr	Met	Lys	Ile	Ser	Arg	Glu	Gln	Ser	Ile	Val		
	50					55					60						
Ser	Arg	Trp	Ile	Lys	Lys	Leu	Val	Gln	Lys	Gly	Tyr	Ile	Met	Ser	Gln		
65				70					75						80		
Gln	Ser	His	Glu	Asp	Leu	Arg	Cys	Lys	Glu	Leu	Ile	Leu	Thr	Glu	Glu		
			85						90					95			
Ala	Arg	Ala	Leu	Ile	Gln	Gln	Ile	Asn	Thr	Ala	Arg	Cys	Glu	Leu	Ile		
			100					105					110				
Glu	Ala	Arg	Cys	Gln	Cys	Leu	Ser	Ser	Asp	Glu	Ile	Ala	Ser	Leu	Asn		
		115					120					125					
Gln	Leu	Leu	Asn	Lys	Leu	Asn	Ser	Arg	His	Ile	Phe	Ile					
	130					135					140						

<210> 5741

<211> 412

<212> PRT

<213> S.epidermidis

<400> 5741

Val	Thr	His	Leu	Asn	Arg	Met	Lys	Ser	Met	Glu	Arg	Phe	Leu	Cys	Met		
1				5					10					15			
Gln	Asp	Ser	Ser	Ser	Asn	Tyr	Ser	Ser	Asn	Arg	Asn	Phe	Val	Met			
			20				25					30					
Met	Leu	Val	Ile	Leu	Phe	Leu	Met	Glu	Phe	Ala	Arg	Gly	Met	Tyr	Ile		
		35					40					45					
Leu	Ser	Tyr	Ile	Asn	Phe	Leu	Pro	Thr	Val	Thr	Ser	Ile	Ala	Ile	Ala		
	50					55					60						
Ile	Thr	Ser	Phe	Ala	Phe	Ser	Ile	His	Phe	Ile	Ala	Asp	Ala	Ala	Thr		
65				70					75					80			
Asn	Phe	Val	Ile	Gly	Phe	Leu	Leu	Lys	Lys	Phe	Gly	Ser	Lys	Leu	Val		
			85					90					95				
Leu	Thr	Ser	Gly	Phe	Leu	Leu	Ala	Phe	Ile	Ser	Leu	Phe	Leu	Val	Ile		
			100				105					110					
Trp	Phe	Pro	Ala	Ser	Pro	Phe	Ile	Ile	Ile	Phe	Ser	Ala	Ile	Met	Leu		
		115				120					125						
Gly	Ile	Ala	Val	Ser	Pro	Ile	Trp	Val	Ile	Met	Leu	Ser	Ser	Val	Asp		
	130					135				140							
Glu	Arg	Asn	Arg	Gly	Lys	Gln	Met	Gly	Tyr	Val	Tyr	Phe	Ser	Trp	Leu		
145					150				155						160		
Leu	Gly	Leu	Leu	Val	Gly	Met	Val	Ile	Met	Asn	Leu	Leu	Ile	Lys	Phe		
			165					170					175				
His	Pro	Thr	Arg	Phe	Ala	Phe	Leu	Met	Ala	Leu	Val	Val	Leu	Ile	Ala		
			180				185						190				
Trp	Val	Leu	Tyr	Tyr	Phe	Val	Asn	Ile	Asn	Leu	Thr	Asn	Tyr	Asn	Thr		
		195				200						205					
Lys	Pro	Val	Lys	Ala	Gln	Leu	Lys	Gln	Ile	Val	Asp	Val	Thr	Gln	Arg		
	210					215					220						

His Leu Ile Leu Phe Pro Gly Ile Leu Leu Gln Gly Ala Ala Ile Ala
 225 230 235 240
 Ala Leu Val Pro Ile Leu Pro Lys Tyr Ala Thr Gln Val Val Lys Val
 245 250 255
 Ser Thr Val Gly Tyr Thr Val Ala Ile Ile Ile Gly Gly Ile Gly Cys
 260 265 270
 Ala Phe Ser Met Leu Phe Leu Ser Lys Ile Ile Asp Asn Asn Ser Lys
 275 280 285
 Gly Phe Met Tyr Gly Val Ile Phe Ser Gly Phe Ile Leu Tyr Thr Ile
 290 295 300
 Leu Ile Phe Gly Leu Ser Thr Ile Thr Asn Ile Tyr Ile Val Trp Ala
 305 310 315 320
 Ile Gly Leu Phe Ile Gly Leu Met Tyr Gly Ile Leu Leu Pro Ala Trp
 325 330 335
 Asn Thr Phe Met Ala Gly His Ile Asn Pro Asn Glu Gln Glu Glu Thr
 340 345 350
 Trp Gly Val Phe Asn Ser Val Gln Gly Phe Gly Ser Met Ile Gly Pro
 355 360 365
 Leu Val Gly Gly Leu Ile Thr Gln Phe Thr Asn Asn Leu Asn Asn Thr
 370 375 380
 Phe Tyr Phe Ser Ala Met Ile Phe Leu Ala Leu Ala Val Phe Tyr Gly
 385 390 395 400
 Tyr Tyr Phe Ile Lys Thr Asn Arg Arg Val Lys Pro
 405 410

<210> 5742

<211> 70

<212> PRT

<213> S.epidermidis

<400> 5742

Lys Leu Ser Gln Ala Ser Pro Lys Leu Trp Phe Asn Trp Ser Arg Ile
 1 5 10 15
 Ser Lys Thr Ser Thr Lys Ser Arg Lys Ser Ile Ile Lys Arg Gln Arg
 20 25 30
 Ile Lys Ile Val Ile Lys Asn Asn Ser His Leu Lys Leu Gln Lys Phe
 35 40 45
 Asn Phe Val Leu Ser Tyr Gln Ser Leu Tyr Lys Lys Asn Val Lys Phe
 50 55 60
 Pro Phe Ile Leu Ser Asn
 65 70

<210> 5743

<211> 391

<212> PRT

<213> S.epidermidis

<400> 5743

Met Val Thr Gln Asn Lys Lys Ile Leu Ile Ile Thr Gly Ser Phe Gly
 1 5 10 15
 Asn Gly His Met Gln Val Thr Gln Ser Ile Val Asn Gln Leu Asn Glu
 20 25 30
 Met Asn Leu Asn His Leu Ser Val Ile Gln His Asp Leu Phe Met Glu
 35 40 45
 Ala His Pro Ile Met Thr Ser Ile Cys Lys Lys Trp Tyr Ile Asn Ser
 50 55 60

```

Phe Lys Tyr Phe Arg Asn Thr Tyr Lys Arg Phe Tyr Tyr Ser Arg Pro
65          70          75          80
Asn Glu Leu Asp Lys Cys Phe Tyr Lys Tyr Tyr Gly Leu Asn Lys Leu
      85          90          95
Ile Asn Leu Leu Ile Lys Glu Lys Pro Asp Leu Ile Leu Leu Thr Phe
      100          105          110
Pro Thr Pro Val Met Ser Val Leu Thr Glu Gln Phe Asn Ile Asn Ile
      115          120          125
Pro Ile Ala Thr Val Met Thr Asp Tyr Arg Met His Lys Asn Trp Ile
      130          135          140
Thr Pro Tyr Ser Gln Arg Tyr Tyr Val Ala Thr Lys Asp Thr Lys Asp
145          150          155          160
Asp Phe Ile Glu Ala Gly Val Pro Ala Ser Tyr Ile Lys Val Thr Gly
      165          170          175
Ile Pro Ile Ala Asp Lys Phe Glu Glu Ser Ile Asp Lys Glu Glu Trp
      180          185          190
Leu Ser Gln Gln His Leu Asp Pro Ser Lys Pro Thr Ile Leu Met Ser
      195          200          205
Ala Gly Ala Phe Gly Val Ser Lys Gly Phe Asp Tyr Met Ile Asn Asn
      210          215          220
Ile Leu Glu Lys Ser Pro Asn Ser Gln Val Val Met Ile Cys Gly Arg
225          230          235          240
Ser Lys Glu Leu Lys Arg Ser Leu Lys Ala Lys Phe Lys Asp Asn Pro
      245          250          255
Ser Val Ile Ile Leu Gly Tyr Thr Asn His Met Asn Glu Trp Met Ala
      260          265          270
Ser Ser Gln Leu Met Ile Thr Lys Pro Gly Gly Ile Thr Ile Ser Glu
      275          280          285
Gly Leu Ser Arg Cys Ile Pro Met Ile Phe Leu Asn Pro Ala Pro Gly
      290          295          300
Gln Glu Leu Glu Asn Ala Tyr Tyr Phe Glu Ser Lys Gly Phe Gly Lys
305          310          315          320
Ile Ala Asp Thr Pro Asn Glu Ala Ile Asp Ile Val Ser Asp Leu Thr
      325          330          335
Asn Asn Glu Glu Thr Leu Lys Val Met Ser Ser Lys Met Leu Glu Ser
      340          345          350
Lys Val Gly Tyr Ser Thr Arg Lys Ile Cys Lys Asp Leu Leu Asp Leu
      355          360          365
Ile Gly His Ser Ser Gln Pro Asp Glu Ile Tyr Gly Lys Val Pro Leu
      370          375          380
Tyr Ala Arg Phe Phe Val Lys
385          390

```

<210> 5744

<211> 397

<212> PRT

<213> S.epidermidis

<400> 5744

```

Phe Phe Ser His His Gly Tyr Asn Asp Ile Ile Gln Tyr Phe Ile Tyr
1          5          10          15
Cys Phe Asp Leu Tyr Cys Arg His Phe Ile Trp Cys Tyr Arg Ser Lys
      20          25          30
Asn Ser Cys Thr Arg Gly Gln Glu Ile Met Ser Asn Lys Glu Asp Val
      35          40          45
Thr Asn Ile Asn Gly Asp Ile Ser Asn Ala Thr Met Ser His Thr Ser

```

```

      50                      55                      60
Asn Asp Ile Ser Asn Thr Asp Phe Ile Ile Arg Asp Leu Asp Leu Asn
65                      70                      75                      80
Gln Glu Pro Glu Met Pro Arg Gln Ser Lys Asn Phe Trp Gln Asp Ala
      85                      90                      95
Trp Ser Gln Leu Lys Arg Asn Lys Leu Ala Val Ile Gly Met Ile Gly
      100                      105                      110
Leu Leu Leu Ile Val Ile Met Ala Phe Ile Gly Pro Leu Met Asn Lys
      115                      120                      125
His Asp Phe Ala Glu Gln Asn Val Asp His Arg Asn Leu Pro Ala Lys
      130                      135                      140
Ile Pro Leu Leu Asp His Val Ser Phe Leu Pro Phe Asp Gly Lys Gly
145                      150                      155                      160
Thr Asp Gly Lys Asn Ala Tyr Lys Glu Ala Gly Ala Lys Glu Asn Tyr
      165                      170                      175
Trp Phe Gly Thr Asp Gln Leu Gly Arg Asp Leu Trp Thr Arg Thr Trp
      180                      185                      190
Lys Gly Ala Gln Ile Ser Leu Tyr Ile Gly Val Val Ala Ala Leu Leu
      195                      200                      205
Asp Ile Cys Ile Gly Val Val Tyr Gly Ala Val Ser Gly Phe Phe Gly
      210                      215                      220
Gly Arg Val Asp Asp Val Met Gln Arg Ile Leu Glu Ile Ile Ala Ser
225                      230                      235                      240
Ile Pro Asn Leu Ile Val Val Ile Leu Phe Val Leu Ile Phe Glu Pro
      245                      250                      255
Ser Ile Trp Thr Ile Ile Leu Ala Met Ser Ile Thr Gly Trp Leu Gly
      260                      265                      270
Met Ser Arg Val Val Arg Gly Glu Phe Leu Lys Leu Lys Asn Gln Glu
      275                      280                      285
Phe Val Leu Ala Ser Gln Thr Leu Gly Ala Ser Lys Phe Lys Leu Ile
      290                      295                      300
Phe Lys His Ile Leu Pro Asn Thr Leu Gly Ala Ile Val Val Thr Ser
305                      310                      315                      320
Met Phe Thr Val Pro Ser Ala Ile Phe Phe Glu Ala Phe Leu Ser Phe
      325                      330                      335
Ile Gly Ile Gly Val Pro Ala Pro Lys Thr Ser Leu Gly Ser Leu Val
      340                      345                      350
Asn Asp Gly Arg Ala Met Leu Leu Ile His Pro His Glu Leu Phe Ile
      355                      360                      365
Pro Ala Ile Ile Leu Ser Leu Leu Ile Leu Phe Phe Tyr Leu Phe Ser
      370                      375                      380
Asp Gly Leu Arg Asp Ala Phe Asp Pro Lys Met Arg Lys
385                      390                      395

```

<210> 5745

<211> 40

<212> PRT

<213> S.epidermidis

<400> 5745

```

Ala Ser Leu Gln Lys Arg Leu Gly His Ala Asn Ile Glu Ile Thr Trp
1                      5                      10                      15
Arg Val Tyr Ser His Leu Leu Lys Val Leu Lys Ser Glu Glu Val Ala
      20                      25                      30
Met Pro Asp Asn Ile Ile Tyr Phe
      35                      40

```

<210> 5746
 <211> 48
 <212> PRT
 <213> S.epidermidis

<400> 5746
 Asn Ile Lys Gln Asn Ile Arg Gly Val Asn Met Gln Asn Ile Ile Lys
 1 5 10 15
 Arg Val Ile Arg Ile Leu Val Ser Gly Tyr Ile Val Lys Met Ile Arg
 20 25 30
 Asn Leu Ile Phe Lys Asn Ser Asn Asp Ser Asn Lys Asn Asn His Lys
 35 40 45

<210> 5747
 <211> 174
 <212> PRT
 <213> S.epidermidis

<400> 5747
 Asn Met Lys His Leu Ile Lys Tyr Leu Ile Ser Phe Thr Phe Ala Ile
 1 5 10 15
 Ile Ile Val Ile Phe Ile Gln Ser Phe Ile Ile Val Gly Ala Val Ile
 20 25 30
 Ser Asn Asn Ser Met Thr Pro Thr Leu Gln Thr Gly Asp Arg Val Ile
 35 40 45
 Val Asn Lys Ile Lys Val Thr Phe Asp Leu Ile Gln Arg Gly Asp Ile
 50 55 60
 Ile Met Tyr Arg His Asn Asn Lys Thr Tyr Phe Ser Arg Ile Ile Gly
 65 70 75 80
 Lys Pro Gly Glu Ser Val Ser Ile Lys Ser Gln Arg Ile Asn Ile Asp
 85 90 95
 Asp Arg Gln Val Asn Glu Pro Tyr Met Lys Asp Arg His Ile Lys Asp
 100 105 110
 Ile Thr Leu Arg Glu Ile Lys Asn Ser Asp Gly Asp Thr Ile Pro Pro
 115 120 125
 Gly Ala Phe Phe Val Leu Asn Asp Asn Asn Asn Lys His Ser Asp Ser
 130 135 140
 Arg Thr Tyr Gly Leu Ile Asp Lys Lys Asp Ile Ile Gly Asp Val Ser
 145 150 155 160
 Leu Lys Tyr Tyr Pro Phe Lys Glu Phe Asn Tyr Gln Phe Lys
 165 170

<210> 5748
 <211> 42
 <212> PRT
 <213> S.epidermidis

<400> 5748
 Asn Met Leu Gln Pro Leu Ile His Gly Leu Leu Leu Ala Leu Gly Leu
 1 5 10 15
 Ile Leu Pro Leu Gly Ala Gln Asn Val Phe Val Phe Asn Gln Gly Ala
 20 25 30
 Asn Gln Lys Lys Leu Val Lys His Tyr Leu
 35 40

<210> 5749
 <211> 317
 <212> PRT
 <213> S.epidermidis

<400> 5749

Glu	Val	Val	His	Ile	Met	Ser	Asp	Gln	Tyr	Gln	Gln	Tyr	Ser	Thr	Val
1				5					10					15	
Lys	Lys	Tyr	Trp	Gln	Leu	Met	Arg	Pro	His	Thr	Leu	Thr	Ala	Ala	Val
			20					25					30		
Val	Pro	Val	Leu	Val	Gly	Thr	Ala	Ala	Lys	Ile	Tyr	Leu	Leu	Gly	
			35				40				45				
Ser	Glu	Asp	His	Leu	Lys	Phe	Ser	Leu	Phe	Leu	Ala	Met	Leu	Leu	Ala
	50					55				60					
Cys	Leu	Leu	Ile	Gln	Ala	Ala	Thr	Asn	Met	Phe	Asn	Glu	Tyr	Tyr	Asp
65				70						75					80
Phe	Lys	Lys	Gly	Leu	Asp	Asp	His	Thr	Ser	Val	Gly	Ile	Gly	Gly	Ala
			85					90						95	
Ile	Val	Arg	Asn	Gly	Met	Ser	Pro	Lys	Gln	Val	Met	Asn	Leu	Ala	Ile
			100					105					110		
Ala	Phe	Tyr	Ile	Ile	Ala	Ala	Leu	Leu	Gly	Ile	Phe	Leu	Ala	Ile	Gln
		115					120					125			
Ser	Ser	Phe	Trp	Ile	Ile	Pro	Val	Gly	Ile	Val	Cys	Met	Ala	Ile	Gly
	130					135					140				
Tyr	Leu	Tyr	Thr	Gly	Gly	Pro	Ile	Pro	Ile	Ser	Trp	Thr	Pro	Phe	Gly
145				150						155					160
Glu	Leu	Phe	Ser	Gly	Leu	Phe	Met	Gly	Met	Ile	Ile	Ile	Leu	Leu	Ser
				165				170						175	
Phe	Phe	Ile	Gln	Thr	Gly	Asn	Val	Gln	Gly	Tyr	Ala	Val	Trp	Leu	Ser
			180					185					190		
Ile	Pro	Ile	Val	Ile	Thr	Ile	Gly	Leu	Ile	Asn	Met	Gly	Asn	Asn	Ile
		195					200					205			
Arg	Asp	Arg	Val	Lys	Asp	Lys	Ala	Ser	Gly	Arg	Lys	Thr	Leu	Pro	Ile
	210					215					220				
Leu	Leu	Gly	Lys	Arg	Ala	Ser	Val	Ile	Phe	Met	Ala	Ile	Met	Tyr	Ala
225				230						235					240
Ile	Ala	Tyr	Ile	Ile	Val	Ile	Ile	Thr	Ala	Phe	Phe	Lys	Pro	Ala	Gly
				245				250						255	
Ser	Leu	Phe	Tyr	Leu	Leu	Val	Leu	Leu	Ser	Phe	Pro	Met	Pro	Ile	Lys
			260				265					270			
Ala	Val	Arg	Arg	Phe	Asn	Lys	Asn	Asp	Thr	Pro	Glu	Thr	Met	Met	Pro
		275					280					285			
Ala	Met	Ala	Ala	Thr	Gly	Lys	Thr	Asn	Thr	Phe	Phe	Gly	Leu	Leu	Tyr
	290					295					300				
Ala	Leu	Gly	Ile	Tyr	Ile	Ser	Ala	Leu	Leu	Gly	Ala	Ile			
305					310					315					

<210> 5750
 <211> 42
 <212> PRT
 <213> S.epidermidis

<400> 5750

Met	Tyr	Phe	Asn	Leu	Ile	Leu	Glu	Lys	Gly	Arg	Phe	Leu	Tyr	Cys	Lys
1				5					10					15	
Ser	Lys	Arg	Ile	Lys	Gln	Lys	Lys	Ser	Phe	Ile	Tyr	Ile	Tyr	Tyr	Ser

20 25 30
 Thr Val Met Gln Asn Asp Ile Ala Ile Val
 35 40

<210> 5751
 <211> 200
 <212> PRT
 <213> S.epidermidis

<400> 5751
 Tyr Asn Pro Lys Lys Gly Phe Asp Val Leu Ser Leu Ser Gln Leu Glu
 1 5 10 15
 Glu Trp Phe Asp Ala Phe Arg Gln Phe Gly Tyr Ile Pro Gly Phe Ile
 20 25 30
 Met Leu Tyr Leu Arg Ala Ile Val Pro Val Leu Pro Leu Thr Leu Tyr
 35 40 45
 Val Val Leu Leu Ile His Ala Tyr Gly Leu Phe Pro Gly Ile Ile Ile
 50 55 60
 Ser Trp Leu Gly Ile Val Ser Gly Thr Phe Thr Val Phe Leu Ile Cys
 65 70 75 80
 Lys Lys Phe Val Asn Thr Ile Arg Met Lys Lys Leu Lys Ser Arg Lys
 85 90 95
 Ser Val Gln Arg Leu Ile Ser Phe Ile Asp Arg Gln Gly Leu Ile Pro
 100 105 110
 Leu Phe Val Leu Leu Cys Phe Pro Phe Thr Pro Asn Thr Leu Ile Asn
 115 120 125
 Ile Ile Ala Ser Leu Ser His Ile Lys Ile Lys Tyr Tyr Phe Phe Val
 130 135 140
 Leu Val Ile Ser Lys Leu Ile Ser Ile Thr Ile Leu Gly Val Met Gly
 145 150 155 160
 Lys Glu Ile Phe Thr Ile Phe Thr Asn Pro Leu Arg Ala Leu Ile Met
 165 170 175
 Ile Val Leu Leu Val Val Leu Trp Phe Ile Ser Lys Lys Val Glu Lys
 180 185 190
 His Phe Met Gly Ser Thr Lys Glu
 195 200

<210> 5752
 <211> 41
 <212> PRT
 <213> S.epidermidis

<400> 5752
 Thr Leu Tyr Lys Ala Asn Leu Arg Gln Ser Met Val Leu Tyr Ala Leu
 1 5 10 15
 Phe Ile Val Phe Lys Tyr Asn Lys Trp Tyr Thr Ser Phe Pro Phe Thr
 20 25 30
 Met His Glu Asn Thr Leu Gln Leu Leu
 35 40

<210> 5753
 <211> 46
 <212> PRT
 <213> S.epidermidis

<400> 5753

Glu Ser His Lys Leu Tyr Asn Tyr Lys Ser Leu Leu Glu Ile Asp Gly
 1 5 10 15
 Arg Leu Asp Leu Lys Ser Asn Phe Asp Asn Pro Lys Leu Ile Leu Asn
 20 25 30
 Thr Lys Val Asn Asn Lys Ser Leu Asn Gln Tyr Leu Ile Phe
 35 40 45

<210> 5754

<211> 60

<212> PRT

<213> S.epidermidis

<400> 5754

Asn Ser Asn Asn Ser Leu Asn Asn Ile Leu His Val Asn Ser Pro Tyr
 1 5 10 15
 Ile Leu Phe Asp Ile Leu Tyr Pro Val Phe Val Gly Ala Lys Ser Lys
 20 25 30
 Ile Cys Tyr Phe Gly Lys Tyr Glu Glu Ile Phe Leu Asp Val Ile Phe
 35 40 45
 Tyr Gln Lys Leu Cys Ser Arg Ile His Leu Leu Phe
 50 55 60

<210> 5755

<211> 415

<212> PRT

<213> S.epidermidis

<400> 5755

Arg Met Asn Lys Asn Asn Arg Val Val Ile Thr Gly Ile Gly Ala Leu
 1 5 10 15
 Ser Pro Ile Gly Asn Asp Ala Lys Thr Trp Asp Asn Ala Leu Lys
 20 25 30
 Gly Val Asn Gly Ile Asp Lys Ile Thr Arg Ile Asp Thr Asp Asp Tyr
 35 40 45
 Asn Val His Leu Ala Gly Glu Leu Lys Asp Phe Asn Ile Glu Asp His
 50 55 60
 Ile Asp Arg Lys Glu Ala Arg Arg Met Asp Arg Phe Thr Gln Tyr Ala
 65 70 75 80
 Val Val Ala Ala Arg Glu Ala Val Lys Asp Ala Gln Leu Asn Ile Asn
 85 90 95
 Glu Lys Asn Ala Asp Arg Ile Gly Val Trp Ile Gly Ser Gly Ile Gly
 100 105 110
 Gly Met Glu Thr Phe Glu Val Ala His Thr Thr Leu Val Glu Arg Gly
 115 120 125
 Pro Arg Arg Val Ser Pro Phe Phe Val Pro Met Leu Ile Pro Asp Met
 130 135 140
 Ala Thr Gly Gln Val Ser Ile Asp Leu Gly Ala Lys Gly Pro Asn Gly
 145 150 155 160
 Ser Thr Val Thr Ala Cys Ala Thr Gly Thr Asn Ser Ile Gly Glu Ala
 165 170 175
 Phe Lys Ile Ile Gln Arg Gly Asp Ala Asp Ala Met Val Thr Gly Gly
 180 185 190
 Thr Glu Ala Pro Ile Thr His Met Ala Ile Ala Gly Phe Ser Ala Ser
 195 200 205
 Arg Ala Leu Ser Thr Asn Asn Asp Pro Glu Thr Ala Cys Arg Pro Phe
 210 215 220

Leu Asp Val Leu Gly Phe Phe Ile His Val Ser Asn Glu Thr Cys Pro
 1 5 10 15
 Leu Ile Lys Leu Arg His Phe Tyr Cys Leu Tyr Gly Ile Met His Leu
 20 25 30
 Ile Lys Phe Ile Thr Ser Asp Thr Phe Leu Thr Thr Lys
 35 40 45

<210> 5758

<211> 73

<212> PRT

<213> S.epidermidis

<400> 5758

Arg Ile Asn Lys Trp Arg Leu Tyr Asn Met Arg Tyr Leu Met Thr Phe
 1 5 10 15
 Ile Trp Ala Val Leu Leu Leu Gln Met Val Asn Phe Val Leu Asn Ser
 20 25 30
 Leu Asn Ser Gly Pro Glu Leu Asn Val Ile Asn Pro Ile Ile Ile Ala
 35 40 45
 Val Ile Phe Thr Ile Val Val Ala Ile Leu Asp Pro Ile Leu Lys Pro
 50 55 60
 Ser Lys Gly Ser Asn Gln Tyr Glu Ser
 65 70

<210> 5759

<211> 104

<212> PRT

<213> S.epidermidis

<400> 5759

Ser Gly Asn Asn Arg Ser Ile Ile Tyr Leu Lys Glu Gly Ser Gln Lys
 1 5 10 15
 Leu Met Ile Ile Asn Arg Gly Pro Ile Val Asp Ile Asp Asn Gln Lys
 20 25 30
 Tyr Ile Phe Asp Tyr Ser Ala Cys Asn Tyr Pro Val Gly Val Val Glu
 35 40 45
 Asp Gln Ile Tyr Tyr Phe Asn Glu Asp Asn Ile Asp Lys Val Val Phe
 50 55 60
 Glu Gly Tyr Ser Asp Gln Asp Glu Met Arg Phe Gln Glu Leu Phe Lys
 65 70 75 80
 Glu Met Lys Asn Asn Leu Asp Asp Asp Ile Gln Gln Gly Ile Val Gln
 85 90 95
 Lys Gln Asp Asn Leu Gly Leu Ile
 100

<210> 5760

<211> 49

<212> PRT

<213> S.epidermidis

<400> 5760

Asn Gln Cys Asn Tyr Asn Ile Asn Cys Phe Val Asn Phe His Tyr Val
 1 5 10 15
 Tyr Leu Arg Met Val Ile Leu Val Phe Ser Leu Ile Phe Ile Phe Thr
 20 25 30
 Asp Asn Tyr Leu Val Tyr Gln Ser Lys Ser Ile Lys Glu Asp Val Met

Ile 35 40 45

<210> 5761
 <211> 276
 <212> PRT
 <213> S.epidermidis

<400> 5761
 Arg Arg Ser Lys Met Thr Arg Gln Trp Glu Thr Leu Arg Glu Tyr Asp
 1 5 10 15
 Glu Ile Lys Tyr Glu Phe Phe Glu Gly Ile Ala Lys Val Thr Ile Asn
 20 25 30
 Arg Pro Glu Val Arg Asn Ala Phe Thr Pro Lys Thr Val Ala Glu Met
 35 40 45
 Ile Asp Ala Phe Ser Arg Ala Arg Asp Asp Gln Asn Val Ser Val Ile
 50 55 60
 Val Leu Thr Gly Glu Gly Asp Lys Ala Phe Cys Ser Gly Gly Asp Gln
 65 70 75 80
 Lys Lys Arg Gly His Gly Gly Tyr Val Gly Glu Asp Asp Ile Pro Arg
 85 90 95
 Leu Asn Val Leu Asp Leu Gln Arg Leu Ile Arg Val Ile Pro Lys Pro
 100 105 110
 Val Ile Ala Met Val Arg Gly Tyr Ala Ile Gly Gly Gly Asn Val Leu
 115 120 125
 Asn Val Val Cys Asp Leu Thr Ile Ala Ala Asp Asn Ala Ile Phe Gly
 130 135 140
 Gln Thr Gly Pro Lys Val Gly Ser Phe Asp Ala Gly Tyr Gly Ser Gly
 145 150 155 160
 Tyr Leu Ala Arg Ile Val Gly His Lys Lys Ala Arg Glu Ile Trp Tyr
 165 170 175
 Leu Cys Arg Gln Tyr Asn Ala Gln Glu Ala Leu Asp Met Gly Leu Val
 180 185 190
 Asn Thr Val Val Pro Leu Glu Gln Val Glu Asp Glu Thr Val Lys Trp
 195 200 205
 Cys Lys Asp Ile Met Gln His Ser Pro Thr Ala Leu Arg Phe Leu Lys
 210 215 220
 Ala Ala Met Asn Ala Asp Thr Asp Gly Leu Ala Gly Leu Gln Gln Met
 225 230 235 240
 Ala Gly Asp Ala Thr Leu Leu Tyr Tyr Thr Thr Asp Glu Ala Lys Glu
 245 250 255
 Gly Arg Asp Ala Phe Lys Glu Lys Arg Asn Pro Asp Phe Asp Gln Phe
 260 265 270
 Pro Lys Phe Pro
 275

<210> 5762
 <211> 55
 <212> PRT
 <213> S.epidermidis

<400> 5762
 Tyr Leu Leu Asn Phe Thr Lys Gly Pro Tyr Phe Phe Lys Val Phe Gln
 1 5 10 15
 Cys Glu Ile Thr Tyr Lys His Lys Val Phe Gly Glu Thr Leu Glu Gly

20 25 30
 Thr Gly Gln Ala Glu Asp Tyr Arg Leu Lys Leu Ser Pro Lys Lys Ala
 35 40 45
 Arg Lys Gln Tyr Glu Val Leu
 50 55

<210> 5763
 <211> 44
 <212> PRT
 <213> S.epidermidis

<400> 5763
 Leu Asp Val Lys Asn Pro Lys Asn Ile Ala Ile Leu Lys Asn Val Tyr
 1 5 10 15
 Lys Leu Asp Ser Gln Tyr Thr Ile Ser Lys Asp Ile Arg Ala Pro Leu
 20 25 30
 Leu Ile Val Phe Leu Phe Arg Met Ile Ser Met Arg
 35 40

<210> 5764
 <211> 85
 <212> PRT
 <213> S.epidermidis

<400> 5764
 Val Phe Lys Asn His Val Gln Arg Glu Asn Ile Asn Tyr Glu Asn Glu
 1 5 10 15
 Asp Ile Asp His Ser Lys Lys His Leu Asn Tyr Asp Leu Ile Asn Asp
 20 25 30
 Gly Lys Gln Asn Phe Asn Asp Leu Ile Asp Glu Lys Ile Glu Arg Asn
 35 40 45
 Tyr Thr Gly Lys Arg Lys Ile Arg Lys Asp Ala Val Lys His Ile Asp
 50 55 60
 Gly Met Ile Thr Ser Asp Asn Glu Phe Phe Ser Asn Gln Thr Pro Val
 65 70 75 80
 Asn Thr Lys Phe Phe
 85

<210> 5765
 <211> 130
 <212> PRT
 <213> S.epidermidis

<400> 5765
 Ser Leu Lys Asn Pro Met Gln Phe Tyr Tyr Ser Asn Cys Glu Gln Asn
 1 5 10 15
 Ala Ser Asn Leu Leu Val Ile Asn Val Gln Pro Asn Glu Gly Phe Ser
 20 25 30
 Leu Cys Val Asn Gly Lys Lys Ser Asn Gln Asn Asn Glu Met Gln Lys
 35 40 45
 Val Lys Leu Ser Tyr Thr Met Pro Ile Lys Asp Lys Met Asn Thr Val
 50 55 60
 Asp Ala Tyr Glu Asn Leu Ile Tyr Asp Thr Leu Ile Gly Glu Gln Thr
 65 70 75 80
 Asn Phe Thr His Trp Glu Glu Leu Lys Ile Leu Gly Asn Leu Leu Met
 85 90 95

Ile Leu Lys Met Tyr Gly Asn Lys Asn Ser His Ser Phe Leu Ile Met
 100 105 110
 Pro Leu Asp Ala Met Gly Leu Lys Lys Val Lys Asn Tyr Leu Val Lys
 115 120 125
 Thr Asp
 130

<210> 5766
 <211> 192
 <212> PRT
 <213> S.epidermidis

<400> 5766
 Thr Leu Lys Lys Glu Ile Leu Glu Trp Ile Val Ala Ile Ala Val Ala
 1 5 10 15
 Ile Ala Leu Ile Ala Ile Ile Thr Lys Phe Val Gly Lys Ser Tyr Ser
 20 25 30
 Ile Lys Gly Asp Ser Met Asp Pro Thr Leu Lys Asp Gly Glu Arg Val
 35 40 45
 Val Val Asn Ile Ile Gly Tyr Lys Leu Gly Gly Val Glu Lys Gly Asn
 50 55 60
 Val Ile Val Phe His Ala Asn Lys Lys Asp Asp Tyr Val Lys Arg Val
 65 70 75 80
 Ile Gly Thr Pro Gly Asp Ser Val Glu Tyr Lys Asn Asp Thr Leu Tyr
 85 90 95
 Val Asn Gly Lys Lys Gln Ser Glu Pro Tyr Leu Asn Tyr Asn Glu Lys
 100 105 110
 Arg Lys Gln Thr Glu Tyr Ile Thr Gly Ser Phe Lys Thr Lys Asn Leu
 115 120 125
 Pro Asn Ala Asn Pro Gln Ser Asn Val Ile Pro Lys Gly Lys Tyr Leu
 130 135 140
 Val Leu Gly Asp Asn Arg Glu Val Ser Lys Asp Ser Arg Ser Phe Gly
 145 150 155 160
 Leu Ile Asp Lys Asp Gln Ile Val Gly Lys Val Ser Leu Arg Tyr Trp
 165 170 175
 Pro Phe Ser Glu Phe Lys Ser Asn Phe Asn Pro Asn Asn Thr Lys Asn
 180 185 190

<210> 5767
 <211> 1335
 <212> PRT
 <213> S.epidermidis

<400> 5767
 Met Ala Lys Lys Phe Asn Tyr Lys Leu Pro Ser Met Val Ala Leu Thr
 1 5 10 15
 Leu Phe Gly Thr Ala Phe Thr Ala His Gln Ala Asn Ala Ala Glu Gln
 20 25 30
 Pro Gln Asn Gln Ser Asn His Lys Asn Val Leu Asp Asp Gln Thr Ala
 35 40 45
 Leu Lys Gln Ala Glu Lys Ala Lys Ser Glu Val Thr Gln Ser Thr Thr
 50 55 60
 Asn Val Ser Gly Thr Gln Thr Tyr Gln Asp Pro Thr Gln Val Gln Pro
 65 70 75 80
 Lys Gln Asp Thr Gln Ser Thr Thr Tyr Asp Ala Ser Leu Asp Glu Met
 85 90 95

Gln	Ile	Lys	Pro	Thr	Asn	Asn	Gly	Leu	Tyr	Thr	Thr	Val	Tyr	Asp	Ser	545	550	555	560
Lys	Gly	His	Lys	Thr	Asp	Gln	Val	Gln	Lys	Thr	Leu	Ser	Val	Thr	Lys	565	570	575	
Thr	Ala	Thr	Leu	Gly	Asn	Asn	Lys	Phe	Tyr	Leu	Val	Glu	Asp	Tyr	Asn	580	585	590	
Ser	Gly	Lys	Lys	Tyr	Gly	Trp	Val	Lys	Gln	Gly	Asp	Val	Val	Tyr	Asn	595	600	605	
Thr	Ala	Lys	Ala	Pro	Val	Lys	Val	Asn	Gln	Thr	Tyr	Asn	Val	Lys	Ala	610	615	620	
Gly	Ser	Thr	Leu	Tyr	Thr	Val	Pro	Trp	Gly	Thr	Pro	Lys	Gln	Val	Ala	625	630	635	640
Ser	Lys	Val	Ser	Gly	Thr	Gly	Asn	Gln	Thr	Phe	Lys	Ala	Thr	Lys	Gln	645	650	655	
Gln	Gln	Ile	Asp	Lys	Ala	Thr	Tyr	Leu	Tyr	Gly	Thr	Val	Asn	Gly	Lys	660	665	670	
Ser	Gly	Trp	Ile	Ser	Lys	Tyr	Tyr	Leu	Thr	Thr	Ala	Ser	Lys	Pro	Ser	675	680	685	
Asn	Pro	Thr	Lys	Pro	Ser	Thr	Asn	Asn	Gln	Leu	Thr	Val	Thr	Asn	Asn	690	695	700	
Ser	Gly	Val	Ala	Gln	Ile	Asn	Ala	Lys	Asn	Ser	Gly	Leu	Tyr	Thr	Thr	705	710	715	720
Val	Tyr	Asp	Thr	Lys	Gly	Lys	Thr	Thr	Asn	Gln	Ile	Gln	Arg	Thr	Leu	725	730	735	
Ser	Val	Thr	Lys	Ala	Ala	Thr	Leu	Gly	Asp	Lys	Lys	Phe	Tyr	Leu	Val	740	745	750	
Gly	Asp	Tyr	Asn	Thr	Gly	Thr	Asn	Tyr	Gly	Trp	Val	Lys	Gln	Asp	Glu	755	760	765	
Val	Ile	Tyr	Asn	Thr	Ala	Lys	Ser	Pro	Val	Lys	Ile	Asn	Gln	Thr	Tyr	770	775	780	
Asn	Val	Lys	Pro	Gly	Val	Lys	Leu	His	Thr	Val	Pro	Trp	Gly	Thr	Tyr	785	790	795	800
Asn	Gln	Val	Ala	Gly	Thr	Val	Ser	Gly	Lys	Gly	Asp	Gln	Thr	Phe	Lys	805	810	815	
Ala	Thr	Lys	Gln	Gln	Gln	Ile	Asp	Lys	Ala	Thr	Tyr	Leu	Tyr	Gly	Thr	820	825	830	
Val	Asn	Gly	Lys	Ser	Gly	Trp	Ile	Ser	Lys	Tyr	Tyr	Leu	Thr	Ala	Pro	835	840	845	
Ser	Lys	Val	Gln	Ala	Leu	Ser	Thr	Gln	Ser	Thr	Pro	Ala	Pro	Lys	Gln	850	855	860	
Val	Lys	Pro	Ser	Thr	Gln	Thr	Val	Asn	Gln	Ile	Ala	Gln	Val	Lys	Ala	865	870	875	880
Asn	Asn	Ser	Gly	Ile	Arg	Ala	Ser	Val	Tyr	Asp	Lys	Thr	Ala	Lys	Ser	885	890	895	
Gly	Thr	Lys	Tyr	Ala	Asn	Arg	Thr	Phe	Leu	Ile	Asn	Lys	Gln	Arg	Thr	900	905	910	
Gln	Gly	Asn	Asn	Thr	Tyr	Val	Leu	Leu	Gln	Asp	Gly	Thr	Ser	Asn	Thr	915	920	925	
Pro	Leu	Gly	Trp	Val	Asn	Ile	Asn	Asp	Val	Thr	Thr	Gln	Asn	Ile	Gly	930	935	940	
Lys	Gln	Thr	Gln	Ser	Ile	Gly	Lys	Tyr	Ser	Val	Lys	Pro	Thr	Asn	Asn	945	950	955	960
Gly	Leu	Tyr	Ser	Ile	Ala	Trp	Gly	Thr	Lys	Asn	Gln	Gln	Leu	Leu	Ala	965	970	975	
Pro	Asn	Thr	Leu	Ala	Asn	Gln	Ala	Phe	Asn	Ala	Ser	Lys	Ala	Val	Tyr	980	985	990	

Val Gly Lys Asp Leu Tyr Leu Tyr Gly Thr Val Asn Asn Arg Thr Gly
 995 1000 1005
 Trp Ile Ala Ala Lys Asp Leu Ile Gln Asn Ser Thr Asp Ala Gln Ser
 1010 1015 1020
 Thr Pro Tyr Asn Tyr Thr Phe Val Ile Asn Asn Ser Lys Ser Tyr Phe
 1025 1030 1035 1040
 Tyr Met Asp Pro Thr Lys Ala Asn Arg Tyr Ser Leu Lys Pro Tyr Tyr
 1045 1050 1055
 Glu Gln Thr Phe Thr Val Ile Lys Gln Lys Asn Ile Asn Gly Val Lys
 1060 1065 1070
 Trp Tyr Tyr Gly Gln Leu Leu Asp Gly Lys Tyr Val Trp Ile Lys Ser
 1075 1080 1085
 Thr Asp Leu Val Lys Glu Lys Ile Lys Tyr Ala Tyr Thr Gly Met Thr
 1090 1095 1100
 Leu Asn Asn Ala Ile Asn Ile Gln Ser Arg Leu Lys Tyr Lys Pro Gln
 1105 1110 1115 1120
 Val Gln Asn Glu Pro Leu Lys Trp Ser Asn Ala Asn Tyr Ser Gln Ile
 1125 1130 1135
 Lys Asn Ala Met Asp Thr Lys Arg Leu Ala Asn Asp Ser Ser Leu Lys
 1140 1145 1150
 Tyr Gln Phe Leu Arg Leu Asp Gln Pro Gln Tyr Leu Ser Ala Gln Ala
 1155 1160 1165
 Leu Asn Lys Leu Leu Lys Gly Lys Gly Val Leu Glu Asn Gln Gly Ala
 1170 1175 1180
 Ala Phe Ser Gln Ala Ala Arg Lys Tyr Gly Leu Asn Glu Ile Tyr Leu
 1185 1190 1195 1200
 Ile Ser His Ala Leu Val Glu Thr Gly Asn Gly Thr Ser Gln Leu Ala
 1205 1210 1215
 Lys Gly Gly Asp Val Ser Lys Gly Lys Phe Thr Thr Lys Thr Gly His
 1220 1225 1230
 Lys Tyr His Asn Val Phe Gly Ile Gly Ala Phe Asp Asn Asn Ala Leu
 1235 1240 1245
 Val Asp Gly Ile Lys Tyr Ala Lys Asn Ala Gly Trp Thr Ser Val Ser
 1250 1255 1260
 Lys Ala Ile Ile Gly Gly Ala Lys Phe Ile Gly Asn Ser Tyr Val Lys
 1265 1270 1275 1280
 Ala Gly Gln Asn Thr Leu Tyr Lys Met Arg Trp Asn Pro Ala Asn Pro
 1285 1290 1295
 Gly Thr His Gln Tyr Ala Thr Asp Ile Asn Trp Ala Asn Val Asn Ala
 1300 1305 1310
 Gln Val Leu Lys Gln Phe Tyr Asp Lys Ile Gly Glu Val Gly Lys Tyr
 1315 1320 1325
 Phe Glu Ile Pro Thr Tyr Lys
 1330 1335

<210> 5768

<211> 57

<212> PRT

<213> S.epidermidis

<400> 5768

Gly Val Glu Lys Tyr Gly Ser Leu Val Thr Val Tyr Ser Ile Phe Ala
 1 5 10 15
 Asp Ser Gln Gly Asn Leu Glu Ser Ala Thr Glu Arg Val Lys Lys Asp
 20 25 30
 Asn Pro Asn Leu Asn Ser Leu Gly Leu Ile Pro Leu Ala Ser Tyr Cys

Ile Ala Phe Ile Asn Leu Ile Ile Gly
 50 55

45

<210> 5769
 <211> 52
 <212> PRT
 <213> S.epidermidis

<400> 5769
 Ile Ile Arg Lys Gly Leu Ile Phe Leu Lys Tyr Phe Asn Val Lys Leu
 1 5 10 15
 His Met Asn Thr Lys Tyr Phe Gly Glu Thr Leu Glu Gly Thr Gly Gln
 20 25 30
 Ala Glu Asp Tyr Arg Leu Lys Leu Ser Pro Lys Lys Ala Ser Gln Gln
 35 40 45
 Tyr Glu Val Leu
 50

<210> 5770
 <211> 518
 <212> PRT
 <213> S.epidermidis

<400> 5770
 His Leu Met Asn Gly Thr Cys Tyr Thr Lys Phe Lys Glu Arg Ser Gly
 1 5 10 15
 Ser Met Glu Lys Asn Glu Asn Lys Ile Val Asp Val Ile Ala Thr Ser
 20 25 30
 Asp Met His Ser His Phe Leu Asn Gly Asp Tyr Gly Ser Asn Ile Tyr
 35 40 45
 Arg Ala Gly Thr Tyr Val Asn Glu Ala Arg Lys Asn Asn Glu Asn Val
 50 55 60
 Ile Leu Leu Asp Ser Gly Gly Ser Leu Ala Gly Ser Leu Ala Ala Phe
 65 70 75 80
 Tyr Tyr Ala Val Val Ala Pro Tyr Lys Arg His Pro Met Ile Lys Leu
 85 90 95
 Met Asn Ala Met Gln Tyr Asp Ala Ser Gly Ile Ser Pro Asn Glu Phe
 100 105 110
 Lys Phe Gly Leu Ser Phe Leu Thr Arg Ser Val Ala Leu Ser Arg Phe
 115 120 125
 Pro Trp Leu Ser Ala Asn Ile Glu Tyr Thr Val Thr Arg Glu Pro Tyr
 130 135 140
 Phe Ser Thr Pro Tyr Thr Ile Lys Met Tyr Ser Asp Leu Lys Ile Ala
 145 150 155 160
 Ile Val Gly Leu Thr Ser Asp Gly Leu Met Lys Asn Glu Tyr Ala Glu
 165 170 175
 Met Glu Glu Asp Val Cys Ile Glu Lys Thr Leu Val Ser Ala Lys Arg
 180 185 190
 Trp Ile Arg Tyr Ile His Glu Val Glu Glu Pro Asp Phe Leu Ile Val
 195 200 205
 Ile Tyr His Gly Gly Leu Asn Lys Ile Ser Ser Ala Asn Lys Arg Asn
 210 215 220
 Glu Lys Asn Ala Asn Glu Ala Glu Lys Ile Met Glu Glu Leu Gly Val
 225 230 235 240
 Ile Asp Val Ile Ile Thr Ala His Gln His Gln Thr Val Val Gly Lys

```

                245                250                255
Asp His Gly Thr Ile Tyr Val Gln Ala Gly Gln Asn Ala Glu Glu Leu
                260                265                270
Val His Leu Ser Ile Lys Phe Lys Lys Arg Thr Thr Ser Tyr Glu Ile
                275                280                285
Glu His Ile Asp Ser Lys Val Ile Asp Leu Asn Asp Tyr His Glu Asp
                290                295                300
Glu Gln Leu Leu Lys Glu Thr Tyr Tyr Asp Arg Lys Ala Val Lys His
305                310                315                320
Trp Ala Asn Ser Val Val Ser Asn Lys Asn Asn Gly Leu Thr Val Gln
                325                330                335
Cys Ile Glu Asp Ile Ile Cys Lys Pro His Pro Phe Thr Gln Leu Leu
                340                345                350
His Asp Ala Ile Arg Leu Ala Tyr Asn Tyr Asp Ile Ser Cys Val His
                355                360                365
Ile Pro Lys Asn Gly Glu Glu Gly Leu Lys Gly Thr Ile Arg Asn Arg
                370                375                380
Asp Ile Tyr Asp Ala Tyr Pro His Pro Asp Lys Pro Ile Asp Ile Thr
385                390                395                400
Val Lys Gly Lys Asn Ile Lys Asp Ile Leu Glu Tyr Ser Tyr Ala His
                405                410                415
Ile Asp Phe Asn Lys Arg Gln Leu Ser Met Thr Met Ile Asp Glu Thr
                420                425                430
Leu Phe Thr Val Trp Gln Gly Phe Asp Tyr Cys Ile Asp Met Ser Gln
                435                440                445
Ser Pro Phe Asn Arg Val Lys Leu Asn Gly Leu Asn Glu Glu Asp Ser
                450                455                460
Tyr Arg Ile Thr Met Thr Asp Tyr Cys Tyr Arg Asn Tyr Lys Met Tyr
465                470                475                480
Leu Gln Glu Ala Ile Val His Asp Thr Tyr Ser Glu Thr Met Gly Gly
                485                490                495
Leu Ile Arg Lys Asn Leu Lys Cys Asp Met Tyr Ser Val Lys Leu Asn
                500                505                510
His Asn Phe Lys Val Tyr
                515

```

<210> 5771

<211> 213

<212> PRT

<213> S.epidermidis

<400> 5771

```

Asn Lys Met Asn Gln Trp Asp Gln Phe Leu Thr Pro Tyr Lys Gln Ala
1                5                10                15
Val Asp Glu Leu Lys Val Lys Leu Lys Gly Leu Arg Lys Gln Tyr Glu
                20                25                30
Val Gly Glu His Asn Ser Pro Ile Glu Phe Val Thr Gly Arg Val Lys
                35                40                45
Pro Ile Ser Ser Val Ile Asp Lys Ala Asn Lys Arg Gly Ile Pro Phe
                50                55                60
Asp Cys Leu His Glu Glu Met Tyr Asp Ile Ala Gly Leu Arg Ile Met
65                70                75                80
Cys Gln Phe Val Asp Asp Ile Asp Ile Val Val Asp Ile Leu Arg Gln
                85                90                95
Arg Gln Asp Phe Lys Val Ile Glu Glu Arg Asp Tyr Ile Arg Asn Thr
                100                105                110

```

Lys Ala Ser Gly Tyr Arg Ser Tyr His Val Ile Ile Lys Tyr Pro Ile
 115 120 125
 Glu Thr Leu Ser Gly Gln Lys His Ile Leu Ala Glu Ile Gln Ile Arg
 130 135 140
 Thr Leu Ala Met Asn Phe Trp Ala Thr Ile Glu His Thr Leu Arg Tyr
 145 150 155 160
 Lys Tyr Asp Gly Ala Tyr Pro Asp Glu Ile Gln His Arg Leu Glu Arg
 165 170 175
 Ala Ala Glu Ala Ala Tyr Leu Leu Asp Glu Glu Met Ser Glu Ile Lys
 180 185 190
 Asp Glu Ile Gln Glu Ala Gln Lys Tyr Tyr Thr Gln Lys Arg Ala Lys
 195 200 205
 Lys His Glu Asn Asp
 210

<210> 5772

<211> 420

<212> PRT

<213> S.epidermidis

<400> 5772

Lys Glu Ala Asn Arg Ile Met Thr Glu Asn Asn Asn Leu Val Thr Ser
 1 5 10 15
 Thr Gln Gly Ile Ile Lys Glu Ala Leu His Lys Leu Gly Phe Asp Asp
 20 25 30
 Gly Met Tyr Asp Leu Ile Lys Glu Pro Ile Arg Phe Leu Gln Val Arg
 35 40 45
 Ile Pro Val Arg Met Asp Asp Gly Thr Val Lys Thr Phe Thr Gly Tyr
 50 55 60
 Arg Ala Gln His Asn Asp Ala Val Gly Pro Thr Lys Gly Gly Val Arg
 65 70 75 80
 Phe His Pro Glu Val Asp Glu Glu Glu Val Lys Ala Leu Ser Met Trp
 85 90 95
 Met Thr Leu Lys Cys Gly Ile Val Asn Leu Pro Tyr Gly Gly Gly Lys
 100 105 110
 Gly Gly Ile Val Cys Asp Pro Arg Gln Met Ser Ile His Glu Val Glu
 115 120 125
 Arg Leu Ser Arg Gly Tyr Val Arg Ala Ile Ser Gln Phe Val Gly Pro
 130 135 140
 Asn Lys Asp Ile Pro Ala Pro Asp Val Phe Thr Asn Ser Gln Ile Met
 145 150 155 160
 Ala Trp Met Met Asp Glu Tyr Ser Ala Leu Asp Lys Phe Asn Ser Pro
 165 170 175
 Gly Phe Ile Thr Gly Lys Pro Ile Val Leu Gly Gly Ser Gln Gly Arg
 180 185 190
 Asp Arg Ser Thr Ala Leu Gly Val Val Ile Ala Ile Glu Gln Ala Ala
 195 200 205
 Lys Arg Arg Gly Met Asp Ile Lys Asp Ala Lys Ile Val Ile Gln Gly
 210 215 220
 Phe Gly Asn Ala Gly Ser Phe Leu Ala Lys Phe Leu Tyr Asp Leu Gly
 225 230 235 240
 Ala Lys Val Val Gly Ile Ser Asp Ala Tyr Gly Ala Leu His Asp Pro
 245 250 255
 Asn Gly Leu Asp Ile Asp Tyr Leu Leu Asp Arg Arg Asp Ser Phe Gly
 260 265 270
 Thr Val Thr Asn Leu Phe Glu Asp Thr Ile Ser Asn Lys Glu Leu Phe

275 280 285
 Glu Leu Asp Cys Asp Ile Leu Val Pro Ala Ala Ile Ser Asn Gln Ile
 290 295 300
 Thr Glu Asp Asn Ala His Asp Ile Lys Ala Ser Ile Val Val Glu Ala
 305 310 315 320
 Ala Asn Gly Pro Thr Thr Pro Glu Ala Thr Arg Ile Leu Thr Glu Arg
 325 330 335
 Asp Ile Leu Leu Val Pro Asp Val Leu Ala Ser Ala Gly Gly Val Thr
 340 345 350
 Val Ser Tyr Phe Glu Trp Val Gln Asn Asn Gln Gly Tyr Tyr Trp Thr
 355 360 365
 Glu Glu Glu Val Asn Asp Lys Leu Arg Glu Lys Leu Val Thr Ala Phe
 370 375 380
 Asp Thr Ile Tyr Glu Leu Ser Gln Asn Arg Lys Ile Asp Met Arg Leu
 385 390 395 400
 Ala Ala Tyr Ile Val Gly Ile Lys Arg Thr Ala Glu Ala Ala Arg Tyr
 405 410 415
 Arg Gly Trp Ala
 420

<210> 5773
 <211> 121
 <212> PRT
 <213> S.epidermidis

<400> 5773
 Ile Lys Lys Asn Ile Tyr Asn Asn Val Ile Ala Leu Leu Phe Asp Trp
 1 5 10 15
 Phe Val Ile Phe Ser Ser Ile Leu Ile Ser Val Thr Phe Asn Asn Ile
 20 25 30
 Leu Ile Tyr Leu Val Ala Ile Ile Leu Ile Gly Ser Arg Met Arg Ala
 35 40 45
 Phe Asp Asn Leu Met His Glu Ala Cys His Arg Ser Leu Phe Thr Asn
 50 55 60
 Lys Phe Trp Asn Lys Trp Ile Thr Cys Leu Phe Val Ala Phe Pro Val
 65 70 75 80
 Phe Thr Ser Tyr Thr Ala Tyr Arg Asn Ala His His Cys Thr Gly Phe
 85 90 95
 Phe Lys Thr Thr Leu Pro Gly Phe Tyr Ser Val Val Lys Asp Ile Phe
 100 105 110
 Thr Pro Asn Tyr Glu Arg Lys Glu Ser
 115 120

<210> 5774
 <211> 381
 <212> PRT
 <213> S.epidermidis

<400> 5774
 Leu Ser Phe Asp Ile Tyr Leu Leu Ser Met Lys Lys Asn Lys Ile Gly
 1 5 10 15
 Gly Ser Gln Ser Met Phe Asn Lys Val Trp Phe Arg Thr Gly Ile Phe
 20 25 30
 Phe Ile Met Leu Phe Ile Leu Ile Lys Leu Phe Met Glu Val His Glu
 35 40 45
 Val Phe Ala Pro Ile Ala Thr Ile Ile Gly Ser Val Phe Leu Pro Phe

50 55 60
 Leu Ile Ser Gly Phe Leu Phe Tyr Ile Cys Leu Pro Phe Gln Asn Ile
 65 70 75 80
 Leu Glu Lys Trp Gly Phe Pro Arg Trp Ala Ser Ile Thr Thr Ile Phe
 85 90 95
 Ile Gly Leu Ile Ala Ile Ile Ala Ile Val Val Ser Phe Ile Ala Pro
 100 105 110
 Ile Ile Ile Ser Asn Ile Asn Asn Leu Ile Lys Gln Thr Pro Ser Leu
 115 120 125
 Gln Lys Glu Ala Glu Gln Leu Ile Asn Phe Ser Leu Arg Gln Met Asp
 130 135 140
 Lys Leu Pro Asp Asp Val Thr His Arg Ile Asn Lys Ala Val Lys Ser
 145 150 155 160
 Met Gly Asp Gly Ala Thr Ser Ile Leu Ser Asn Ser Val Ser Tyr Ile
 165 170 175
 Thr Ser Phe Ile Ser Thr Val Phe Leu Leu Ile Met Val Pro Phe Phe
 180 185 190
 Leu Ile Tyr Met Leu Lys Asp His Glu Lys Phe Ile Pro Ala Ile Gly
 195 200 205
 Lys Phe Phe Lys Gly Glu Arg Lys Val Phe Val Val Asp Leu Leu Lys
 210 215 220
 Asp Leu Asn Phe Thr Leu Lys Ser Tyr Ile Gln Gly Gln Val Thr Val
 225 230 235 240
 Ser Ile Ile Leu Gly Ile Ile Leu Tyr Ile Gly Tyr Thr Ile Ile Gly
 245 250 255
 Leu Pro Tyr Thr Pro Leu Leu Val Leu Phe Ala Gly Val Ala Asn Leu
 260 265 270
 Ile Pro Phe Leu Gly Pro Trp Leu Ser Phe Ala Pro Ala Ala Ile Leu
 275 280 285
 Gly Ile Ile Asp Gly Pro Ser Thr Phe Ile Trp Val Cys Val Val Thr
 290 295 300
 Leu Ile Ala Gln Gln Leu Glu Gly Asn Val Ile Thr Pro Asn Val Met
 305 310 315 320
 Gly Lys Ser Leu Ser Ile His Pro Leu Thr Ile Ile Val Val Ile Leu
 325 330 335
 Ala Ala Gly Asp Leu Gly Gly Phe Thr Leu Ile Leu Val Ala Val Pro
 340 345 350
 Leu Tyr Ala Val Ile Lys Thr Leu Val Ser Asn Ile Phe Lys Tyr Arg
 355 360 365
 Gln Arg Ile Val Asp Lys Ala Asn Ser Asn Val Lys Asp
 370 375 380

<210> 5775

<211> 463

<212> PRT

<213> S.epidermidis

<400> 5775

Asn Gln Ile Glu Ile Asn Val Glu Val Lys Ile Met Ser Val Leu Ser
 1 5 10 15
 Gln Leu Leu Lys Lys Ser Ser Pro Gln Gln Gly Ile Ile Leu Tyr Tyr
 20 25 30
 Leu Phe Ala Ile Val Val Ala Phe Leu Leu Leu Asn Leu Pro Tyr Val
 35 40 45
 His Lys Gln Gly Val Glu Val Asn Pro Ile Asp Thr Leu Phe Val Ala
 50 55 60

<400> 5776

Arg Arg Ile Asp Thr Ile Thr Tyr Leu Lys Ser Leu Glu Thr Leu Arg
 1 5 10 15
 Lys Pro Leu Asn Val Leu Tyr Lys Val Glu Thr Glu Lys Val Gly Gly
 20 25 30
 Leu Phe Asp Lys Glu Leu Gln Glu Thr Ala Asn Val Val Ile Asn Lys
 35 40 45
 Asp Glu Phe Asn Gln Phe Gln Glu
 50 55

<210> 5777

<211> 61

<212> PRT

<213> S.epidermidis

<400> 5777

Phe Ile Leu Asp Gly Ile Phe Val Cys Cys Cys Ile Asp Phe Ser Asp
 1 5 10 15
 Trp Phe Gly Ala Gly Glu Trp Phe Glu Val Ser Ala Ile Glu Gly Glu
 20 25 30
 Leu Lys Leu Ala Lys Pro Ser Val Thr Val Asp Lys Val Glu Met Ile
 35 40 45
 Ile Phe Leu Asp Leu Asn Ile Lys Thr Ser Phe Gln Lys
 50 55 60

<210> 5778

<211> 203

<212> PRT

<213> S.epidermidis

<400> 5778

Asn Met Ile Glu Val Thr Phe Met Ser Thr Asn Asn Glu Ile Glu Phe
 1 5 10 15
 Lys Gln Ile Leu Asn Gln Asp Thr Tyr Ser Lys Ile Tyr Glu Leu Tyr
 20 25 30
 Phe Lys Asn Gln Ser Pro Phe Lys Gln Thr Asn Phe Tyr Ile Asp Thr
 35 40 45
 Glu Asn Phe Lys Leu Lys Gln His Gln Ala Ala Leu Arg Ile Arg Val
 50 55 60
 Lys Asp Tyr Met Tyr Glu Met Thr Leu Lys Val Pro Ala Glu Val Gly
 65 70 75 80
 Leu Thr Glu Tyr Asn His Ser Val Asn Ile Glu Pro Lys Leu Asp Met
 85 90 95
 Ser Leu Gln Leu Ser Gln Leu Pro Asn Asp Ile Arg Asn Ile Leu Glu
 100 105 110
 Gln Asp Phe Asn Ile Leu Glu Asn Glu Leu Lys Val Leu Gly Asn Leu
 115 120 125
 Thr Thr Tyr Arg Leu Glu Thr Glu Tyr Gln Asn Glu Leu Leu Val Leu
 130 135 140
 Asp Lys Ser Glu Tyr Leu Gly Lys Thr Asp Tyr Glu Leu Glu Phe Glu
 145 150 155 160
 Val His Ser Tyr Asp Glu Gly Tyr Ser Lys Phe Lys Ser Leu Leu Gln
 165 170 175
 His Phe Asn Leu Gln His Gln Lys Pro Leu Asn Lys Val Gln Arg Phe
 180 185 190
 Phe Gln Glu Lys Gln Asn Ala Ser Asp Lys Asp

195

200

<210> 5779

<211> 332

<212> PRT

<213> S.epidermidis

<400> 5779

Trp Gly Glu Glu Met Leu Met Ala Ile Asn Gln Gln Gly Gln Lys Ile
 1 5 10 15
 Leu Ala Gln His Ala Asn Lys Phe Asp Lys Tyr Gln Cys Pro His Cys
 20 25 30
 Lys Ser Glu Val Ile Leu Lys Gln Gly Met Thr Leu Ile Ala His Phe
 35 40 45
 Ala His Lys Thr Arg Phe Asn His Arg Cys Ser Lys Ser Glu Ser Val
 50 55 60
 Glu His Tyr Glu Ala Lys Leu Tyr Leu Ala Arg Ile Tyr Lys Ala Leu
 65 70 75 80
 Asn Phe Asn Val Glu Ile Glu Pro Tyr Tyr Lys Glu Val Leu Gln Tyr
 85 90 95
 Pro Asp Ile Val Ile Asn Gln Glu Asn Ala Ile Glu Val Gln Phe Ser
 100 105 110
 Lys Ile Ser Ile Ser Lys Ile Ile Arg Arg Thr Thr Gly Leu Lys Arg
 115 120 125
 Ile Gly Leu Asn Val Ile Trp Ile Ile Lys Asp Val Pro Leu Lys Tyr
 130 135 140
 Lys Tyr Val Lys Leu Ser Pro Phe Gln Ser Ala Phe Ile His Pro Ile
 145 150 155 160
 Asn Arg Thr Leu Val Thr Trp Asp Ser Lys Lys Phe Val Leu Ile Leu
 165 170 175
 Tyr Ser Gln Leu Gln His Val Gly Gly Lys Asn Phe Val Ala Gln Arg
 180 185 190
 Lys Val Leu Lys Phe Glu Asp Ile Ile Asn Met Thr Phe Gln Ser Asn
 195 200 205
 Asn Val Pro Asn Phe Arg Leu Ser Ala Ser Asn Ile Gln Arg Tyr Ile
 210 215 220
 Asn Tyr Cys Arg Lys Arg His Ser Val Leu Glu Pro Thr Leu Ser Ala
 225 230 235 240
 Met Tyr Gln Leu Asn Met Tyr Asp Ser Asp Val Ile Cys Lys Leu Gly
 245 250 255
 Tyr Val Val Pro His Gln Ile Tyr Leu Ile Thr His Pro Ile Glu Trp
 260 265 270
 Gln Leu Lys Tyr Leu Leu Leu Arg Arg Thr Leu Asn Asp Asn Glu Leu
 275 280 285
 Cys Lys Gln Leu Leu Ser Gln Val Lys Phe Arg Val Phe Ala Thr Phe
 290 295 300
 Gln Tyr Asp Lys Arg Gln Ile Leu Ser Thr Ile Leu Arg Glu Phe Asp
 305 310 315 320
 Tyr Leu Tyr Glu His Glu Ser Leu Asn Val Gln Lys
 325 330

<210> 5780

<211> 871

<212> PRT

<213> S.epidermidis

<400> 5780

```

Asn Asn Leu Asp Ile Asn Gln Met Thr Tyr Ala Val Gln Gly Ala Leu
1      5      10      15
Gln Lys Ala Val Ala Tyr Ser Lys Glu Tyr Glu Leu Gln Asn Ile Glu
20      25      30
Val Glu Ala Leu Leu Lys Ala Ala Met Asn Glu Asn Asp Ser Leu Phe
35      40      45
Lys Ser Ile Leu Glu Arg Ala Asn Ile Asp Val Asp Gln Leu Ile Lys
50      55      60
Ala Tyr Asp Asn Gln Leu Ser His Tyr Pro Thr Val Gln Gly Asp Asn
65      70      75      80
Val Gln Tyr Gly Gln Tyr Ile Ser Ala Lys Thr Asn Glu Leu Leu Asp
85      90      95
Lys Ala Glu Lys Tyr Met Lys Ser Tyr Glu Asp Glu Phe Ile Ser Met
100     105     110
Glu His Ile Leu Arg Ala Ala Ile Asp Thr Asp Glu Thr Thr Gln Lys
115     120     125
Trp Val Gly Asn Lys Val Glu Val Ile Lys Glu Ile Ile Thr Lys Val
130     135     140
Arg Gly Gly Asn His Val Thr Ser Gln Asn Pro Glu Val Asn Tyr Glu
145     150     155     160
Ala Leu Glu Lys Tyr Gly Arg Asp Leu Val Glu Glu Val Arg Gln Gly
165     170     175
Lys Met Asp Pro Val Ile Gly Arg Asp Glu Glu Ile Arg Asn Thr Ile
180     185     190
Arg Ile Leu Ser Arg Lys Thr Lys Asn Asn Pro Val Leu Ile Gly Glu
195     200     205
Pro Gly Val Gly Lys Thr Ala Ile Val Glu Gly Leu Ala Gln Arg Ile
210     215     220
Val Arg Lys Asp Val Pro Glu Ser Leu Leu Asp Lys Thr Ile Phe Glu
225     230     235     240
Leu Asp Leu Ser Ala Leu Val Ala Gly Ala Lys Tyr Arg Gly Glu Phe
245     250     255
Glu Glu Arg Leu Lys Ala Val Leu Lys Glu Val Lys Glu Ser Glu Gly
260     265     270
Arg Ile Ile Leu Phe Ile Asp Glu Ile His Met Leu Val Gly Ala Gly
275     280     285
Lys Thr Asp Gly Ala Met Asp Ala Gly Asn Met Leu Lys Pro Met Leu
290     295     300
Ala Arg Gly Glu Leu His Cys Ile Gly Ala Thr Thr Leu Asn Glu Tyr
305     310     315     320
Arg Glu Tyr Ile Glu Lys Asp Ser Ala Leu Glu Arg Arg Phe Gln Lys
325     330     335
Val Gly Val Ser Glu Pro Asp Val Glu Asn Thr Ile Ser Ile Leu Arg
340     345     350
Gly Leu Lys Glu Arg Tyr Glu Val Tyr His Gly Val Arg Ile Gln Asp
355     360     365
Arg Ala Leu Val Ala Ala Ala Glu Leu Ser Asp Arg Tyr Ile Thr Asp
370     375     380
Arg Phe Leu Pro Asp Lys Ala Ile Asp Leu Val Asp Gln Ala Cys Ala
385     390     395     400
Thr Ile Arg Thr Glu Met Gly Ser Asn Pro Thr Glu Leu Asp Gln Val
405     410     415
Asn Arg Arg Val Met Gln Leu Glu Ile Glu Glu Ser Ala Leu Lys Asn
420     425     430
Glu Ser Asp Asn Ala Ser Lys His Arg Leu Glu Glu Leu Gln Glu Glu

```

		435					440					445				
Leu	Ser	Asn	Glu	Lys	Glu	Lys	Gln	Ser	Ser	Leu	Lys	Ser	Arg	Val	Glu	
	450					455					460					
Gln	Glu	Lys	Glu	Lys	Ile	Ala	Lys	Val	Gln	Glu	Lys	Arg	Ala	Glu	Leu	
465					470						475				480	
Asp	Ser	Ser	Arg	Gln	Ala	Leu	Glu	Asp	Ala	Gln	Thr	Glu	Gly	Asn	Leu	
				485					490					495		
Glu	Lys	Ala	Ala	Glu	Leu	Gln	Tyr	Gly	Thr	Ile	Pro	Gln	Leu	Glu	Lys	
			500					505					510			
Glu	Leu	Gln	Glu	Phe	Glu	Glu	Ala	Phe	Gln	Asp	Glu	Thr	Gly	Glu	Asp	
		515					520					525				
Ser	Glu	Arg	Met	Ile	Arg	Glu	Val	Val	Ser	Asp	Glu	Glu	Ile	Gly	Asp	
	530					535					540					
Ile	Val	Ser	Gln	Trp	Thr	Gly	Ile	Pro	Val	Ser	Lys	Leu	Val	Glu	Thr	
545					550					555					560	
Glu	Arg	Glu	Lys	Leu	Leu	Ser	Leu	Ser	Asp	Ile	Leu	His	Lys	Arg	Val	
				565					570					575		
Val	Gly	Gln	Asp	Lys	Ala	Val	Asp	Leu	Val	Ser	Asp	Ala	Val	Val	Arg	
			580					585					590			
Ala	Arg	Ala	Gly	Ile	Lys	Asp	Pro	Asn	Arg	Pro	Ile	Gly	Ser	Phe	Leu	
		595					600					605				
Phe	Leu	Gly	Pro	Thr	Gly	Val	Gly	Lys	Thr	Glu	Leu	Ala	Lys	Ser	Leu	
	610					615					620					
Ala	Ser	Ser	Leu	Phe	Asp	Ser	Glu	Lys	His	Met	Ile	Arg	Ile	Asp	Met	
625					630					635				640		
Ser	Glu	Tyr	Met	Glu	Lys	His	Ala	Val	Ser	Arg	Leu	Ile	Gly	Ala	Pro	
				645					650					655		
Pro	Gly	Tyr	Val	Gly	His	Asp	Glu	Gly	Gly	Gln	Leu	Thr	Glu	Ala	Val	
			660					665					670			
Arg	Arg	Asn	Pro	Tyr	Ser	Val	Ile	Leu	Leu	Asp	Glu	Val	Glu	Lys	Ala	
		675					680					685				
His	Ser	Asp	Val	Phe	Asn	Val	Leu	Leu	Gln	Ile	Leu	Asp	Glu	Gly	Arg	
	690				695						700					
Leu	Thr	Asp	Ser	Lys	Gly	Arg	Ser	Val	Asp	Phe	Lys	Asn	Thr	Ile	Ile	
705					710					715					720	
Ile	Met	Thr	Ser	Asn	Ile	Gly	Ser	Gln	Val	Leu	Leu	Glu	Asn	Val	Lys	
				725					730					735		
Asp	Ala	Gly	Glu	Ile	Ser	Asp	Asp	Thr	Glu	Lys	Ala	Val	Met	Asp	Ser	
			740					745					750			
Leu	His	Ala	Tyr	Phe	Lys	Pro	Glu	Ile	Leu	Asn	Arg	Met	Asp	Asp	Ile	
		755					760					765				
Val	Leu	Phe	Lys	Pro	Leu	Ser	Val	Asp	Asp	Met	Ser	Met	Ile	Val	Asp	
	770					775					780					
Lys	Ile	Leu	Thr	Gln	Leu	Asn	Met	Arg	Leu	Leu	Asp	Gln	His	Ile	Ser	
785					790					795</						

<210> 5781
 <211> 45
 <212> PRT
 <213> S.epidermidis

<400> 5781
 Thr Cys Leu Asp Thr Ile Thr Tyr Asp Leu Tyr Leu Leu Lys Tyr Glu
 1 5 10 15
 His His Ile Ile Pro Lys Lys Lys Thr Lys Met Asn Ser Lys Asn Ser
 20 25 30
 Phe Trp Ser Phe Tyr Met Lys Ile Ile Ser Ser Phe Ser
 35 40 45

<210> 5782
 <211> 209
 <212> PRT
 <213> S.epidermidis

<400> 5782
 Asn Lys Met Asp Tyr Val Tyr Thr Ile Tyr Lys Asn Pro Arg Tyr Asn
 1 5 10 15
 Ile Ile Gln Lys Asp Asn Arg Tyr Leu Met Val Asp Leu Glu Gln Asn
 20 25 30
 Trp Tyr Ser Tyr Leu Cys Pro Met Leu Asn Trp Phe Ile Pro Ile Lys
 35 40 45
 Phe Thr Glu Leu Thr Tyr Gln Glu Phe Asn Asn Ile Asn Ile Phe His
 50 55 60
 Asn Gly Gly Gln Lys Ser His Gly Met Met Ala Ala Gly Val Gly Val
 65 70 75 80
 Thr Ile Ser Val Leu Arg Ser Leu Val Gly Tyr Ile Asp Ile Asn
 85 90 95
 Ile Ser Arg Ile Trp Ile Val Phe Met Phe Leu Ile Gly Phe Val Ala
 100 105 110
 Val Ile Thr Leu Arg Leu Ser Ile Arg Lys Lys Leu Asn His Pro Ala
 115 120 125
 Phe Asn Lys Lys Ser Lys Gln Lys Val Ile Leu Ile Pro Ser Phe Lys
 130 135 140
 Asn Met Ile Leu Val Val Phe Cys Tyr Phe Met Met Leu Phe Phe Ser
 145 150 155 160
 Ile Ala Pro Phe Gln Met Ile Phe Glu Glu Lys Lys Asn Ile Leu Gly
 165 170 175
 Tyr Ile Leu Trp Val Gly Val Leu Phe Ile Phe Thr Thr Leu Asn Met
 180 185 190
 Ala Ser Ile Ser Asp Arg Lys Val His Ala Lys Ile Lys Asn Ile Arg
 195 200 205
 Arg

<210> 5783
 <211> 462
 <212> PRT
 <213> S.epidermidis

<400> 5783
 Asn Ser Glu Glu Lys Glu Val Lys Lys Met Asp Val Asn Val Asp Glu
 1 5 10 15

Gln	Ala	Ile	Val	Asp	Lys	Leu	Tyr	Glu	Ser	Thr	Lys	Asp	Trp	Val	Ser		
			20					25					30				
Val	Glu	Val	Glu	Leu	Asn	Lys	Thr	Met	Lys	Pro	Ser	Val	Leu	Phe	His		
		35					40					45					
Leu	Thr	Glu	Lys	Asp	Ala	Gly	Asp	Arg	Phe	Tyr	Met	Arg	Leu	Asn	Asp		
		50				55					60						
Asn	Tyr	Ser	Ser	Tyr	Phe	Gly	Tyr	His	Ala	Ile	His	Arg	Phe	Lys	Asn		
65					70					75					80		
Asp	Phe	Glu	Asn	Lys	Gln	Ser	Ile	Phe	Lys	Asp	Trp	Glu	Lys	Leu	Lys		
				85					90					95			
Asn	Asn	Ile	Glu	Leu	Ile	His	Pro	His	Asn	Lys	Tyr	His	His	Leu	Arg		
			100					105					110				
Leu	Cys	Gly	Gly	Phe	Gln	Phe	Ser	Ser	His	Lys	Ser	Asp	Asp	Glu	Trp		
		115					120					125					
Arg	Glu	Tyr	Gly	Leu	Asn	His	Phe	Val	Leu	Pro	Lys	Val	Leu	Ile	Ser		
		130				135					140						
Asn	Glu	Gly	Thr	Arg	Thr	Tyr	Leu	Thr	Tyr	Thr	Thr	Lys	Arg	Gln	Asp		
145					150					155					160		
Phe	Asp	Leu	Gln	Ala	Phe	Lys	Thr	Leu	Val	Ala	His	Phe	Glu	Gln	Thr		
				165				170						175			
Thr	Met	Asp	Asn	Pro	Glu	Glu	Ala	Leu	Gly	Asp	Val	Thr	Arg	Met	Glu		
			180					185					190				
Asp	Ile	Tyr	Lys	Asp	Asp	Trp	Arg	Asp	Leu	Val	Lys	Glu	Ala	Ile	Asp		
		195				200					205						
Thr	Ile	Asp	Asp	Asn	Lys	Lys	Ile	Val	Leu	Ala	Arg	Arg	Arg	Leu	Val		
		210				215					220						
Lys	Phe	Asp	Lys	Lys	Ile	Asn	Ile	Pro	Tyr	Val	Leu	Asn	Arg	Ala	Leu		
225					230					235					240		
Glu	Asn	Glu	Lys	Asn	Ser	Tyr	Ile	Phe	Leu	Leu	Glu	Ala	Asn	Gln	Ser		
				245					250					255			
Ile	Phe	Phe	Ser	Gln	Thr	Pro	Glu	Gln	Leu	Ile	Lys	Val	Glu	Asp	Gly		
			260					265					270				
Val	Leu	Ser	Thr	Lys	Ala	Val	Ala	Gly	Thr	Ile	Lys	Arg	Thr	His	Asn		
		275						280					285				
Glu	Gln	Ile	Asp	Asn	Lys	Asn	Ile	Glu	Ala	Phe	Leu	Lys	Asp	Lys	Lys		
		290				295					300						
Asn	Leu	Gly	Glu	His	Arg	Phe	Val	Val	Glu	Ser	Ile	Leu	Asn	Asp	Ile		
305					310					315					320		
Glu	Pro	Phe	Val	Gln	Asp	Val	Glu	Tyr	Asn	Glu	Thr	Pro	Asn	Ile	Leu		
				325					330					335			
Lys	Asn	Asp	His	Met	Tyr	His	Leu	Tyr	Thr	Glu	Ile	Lys	Ala	Asn	Leu		
			340					345					350				
Asn	Asp	Lys	Ser	Tyr	Ile	Gly	Leu	Ile	Asp	Arg	Leu	His	Pro	Thr	Pro		
		355					360					365					
Ala	Leu	Gly	Gly	Tyr	Pro	Lys	Glu	Glu	Ala	Leu	Asp	Phe	Ile	Glu	Asn		
		370				375					380						
Lys	Glu	Phe	Gly	Thr	Arg	Gly	Leu	Tyr	Gly	Ala	Pro	Val	Gly	Tyr	Ile		
385					390					395					400		
Asp	Val	Tyr	Asp	Asp	Cys	Glu	Phe	Ile	Val	Ala	Ile	Arg	Ser	Met	Leu		
				405					410					415			
Ile	Lys	Glu	Gln	Gln	Ala	Thr	Leu	Tyr	Ala	Gly	Cys	Gly	Ile	Val	Lys		
			420					425					430				
Asn	Ser	Asp	Pro	Asp	Ser	Glu	Val	Ala	Glu	Thr	Ala	Val	Lys	Phe	Ser		
		435					440					445					
Pro	Met	Met	Asn	Ala	Leu	Gly	Val	Asp	Asn	Asn	Asp	Glu	Ser				
		450				455					460						

<210> 5784
 <211> 44
 <212> PRT
 <213> S.epidermidis

<400> 5784
 Ala His Thr Leu Asp Thr Phe Lys Pro Ile Val Val Trp Ala Trp Tyr
 1 5 10 15
 Thr His Lys Phe Gln Phe Arg Asn Lys Arg Leu Pro Asp Asp Leu Phe
 20 25 30
 Ser Trp Ser Gly His Leu Leu Trp Ile Met Leu Leu
 35 40

<210> 5785
 <211> 62
 <212> PRT
 <213> S.epidermidis

<400> 5785
 Ile Gly Gly Phe Ile Asn Val His Lys Phe Leu Phe Asp Phe Val Ile
 1 5 10 15
 Ile Tyr Ala Ser Phe Ile Asn Asn Tyr Met Val Ile Leu Phe Lys Ser
 20 25 30
 Leu Tyr Lys Phe Asn Gln Tyr Leu Ile Leu Tyr Ile Ile His Tyr Phe
 35 40 45
 Tyr Ser Cys Phe Pro Tyr Phe Thr His Ser Arg Arg Asn Ile
 50 55 60

<210> 5786
 <211> 127
 <212> PRT
 <213> S.epidermidis

<400> 5786
 Tyr Val Lys Leu Val Trp Asn Lys Glu Glu Thr Ser Met Arg Ile Tyr
 1 5 10 15
 Ile Asn Glu Ile Lys Leu Lys Asp Asp Gly Val Tyr Cys Phe Ser Glu
 20 25 30
 Glu Ser Thr Glu Gly Leu Glu Glu Val Gly Gln Met Leu Val Asp Ser
 35 40 45
 Asp Asn Tyr Gly Phe Ala Tyr Leu Leu Asp Asp Gly Gln Ser Tyr Ser
 50 55 60
 Tyr Leu Ile Phe Val Gln Glu Thr Trp Ser Met Leu His Glu Asn Arg
 65 70 75 80
 Asp Lys Arg Ile Ile Ile Asn Asn His Leu Glu Leu Lys His Phe Gln
 85 90 95
 Glu Glu Leu Asp Tyr Val Leu Asn Asn Ile Glu Gly Asn Asn Asn Tyr
 100 105 110
 Gly Lys Glu Phe Val Ser Ala Val Glu Lys Thr Phe Glu Leu Glu
 115 120 125

<210> 5787
 <211> 44
 <212> PRT
 <213> S.epidermidis

<400> 5787

Asp Lys Ile Cys Leu Asn Lys Leu Ile Arg Ser Asn Ser Val Arg Leu
 1 5 10 15
 Met Lys Leu Ile Ser Lys Lys Val Thr Cys Leu Thr Lys Phe Ile Ile
 20 25 30
 Asn Arg Glu Glu Cys Asn Asn Glu Lys Lys Ile Lys
 35 40

<210> 5788

<211> 43

<212> PRT

<213> S.epidermidis

<400> 5788

Ile Lys Ser Cys Lys Val Gly Ile Asp Ile Ser Ile Lys Asp Thr Pro
 1 5 10 15
 Lys Ile Ala Ile Thr Ile Lys Lys Val Ser His Ser Pro Ala Val Ile
 20 25 30
 Ile Thr Gly Asn Ala Leu Leu Ile Phe Phe Gly
 35 40

<210> 5789

<211> 406

<212> PRT

<213> S.epidermidis

<400> 5789

Val Phe Ile Arg Lys Arg Arg Gly Asp Phe Met Thr Gln Ser Glu Lys
 1 5 10 15
 Ile Ile Asn Leu Thr Asn His Tyr Gly Ala His Asn Tyr Val Pro Leu
 20 25 30
 Pro Ile Val Ile Ser Glu Ala Glu Gly Val Trp Val Lys Asp Pro Glu
 35 40 45
 Gly Asn Thr Tyr Met Asp Met Leu Ser Ala Tyr Ser Ala Val Asn Gln
 50 55 60
 Gly His Arg His Pro Arg Ile Ile Gln Ala Leu Lys Asp Gln Ala Asp
 65 70 75 80
 Lys Val Thr Leu Val Ser Arg Ala Phe His Ser Asp Asn Leu Gly Gln
 85 90 95
 Trp Tyr Glu Lys Ile Cys Lys Leu Ala Gly Lys Asp Lys Ala Leu Pro
 100 105 110
 Met Asn Thr Gly Ala Glu Ala Val Glu Thr Ala Leu Lys Ala Ala Arg
 115 120 125
 Arg Trp Ala Tyr Asp Val Lys Gly Ile Glu Pro Asn Lys Ala Glu Ile
 130 135 140
 Ile Ala Phe Asn Gly Asn Phe His Gly Arg Thr Met Ala Pro Val Ser
 145 150 155 160
 Leu Ser Ser Glu Ala Glu Tyr Gln Arg Gly Tyr Gly Pro Leu Leu Asp
 165 170 175
 Gly Phe Arg Lys Val Glu Phe Gly Asp Val Asn Gln Leu Lys Ala Ala
 180 185 190
 Ile Asn Lys Asn Thr Ala Ala Ile Leu Val Glu Pro Ile Gln Gly Glu
 195 200 205
 Ala Gly Ile Asn Val Pro Pro Glu Gly Tyr Leu Lys Thr Ile Arg Glu
 210 215 220

Leu Cys Asp Glu His Gln Ile Leu Phe Ile Ala Asp Glu Ile Gln Ala
 225 230 235 240
 Gly Leu Gly Arg Ser Gly Lys Leu Phe Ala Thr Asp Trp Asp His Val
 245 250 255
 Lys Pro Asp Val Tyr Ile Leu Gly Lys Ala Leu Gly Gly Gly Val Phe
 260 265 270
 Pro Ile Ser Val Val Leu Ala Asp Asn Glu Val Leu Asp Val Phe Thr
 275 280 285
 Pro Gly Ser His Gly Ser Thr Phe Gly Gly Asn Pro Leu Ala Ser Ala
 290 295 300
 Val Ser Ile Ala Ala Ile Asp Val Ile Ile Asp Glu Asp Leu Pro Gly
 305 310 315 320
 Arg Ser Leu Glu Leu Gly Glu Tyr Phe Lys Ser Glu Leu Lys Lys Ile
 325 330 335
 Glu His Pro Ser Ile Lys Glu Val Arg Gly Arg Gly Leu Phe Ile Gly
 340 345 350
 Ile Glu Leu His Glu Ser Ala Arg Pro Tyr Cys Glu Ala Leu Lys Glu
 355 360 365
 Gln Gly Leu Leu Cys Lys Glu Thr His Asp Thr Val Ile Arg Phe Ala
 370 375 380
 Pro Pro Leu Val Ile Thr Lys Glu Glu Leu Asp Met Ala Leu Glu Lys
 385 390 395 400
 Ile Lys Ser Val Phe Ala
 405

<210> 5790

<211> 51

<212> PRT

<213> S.epidermidis

<400> 5790

Thr Pro Val Arg Asp Asn Ser Leu Ile Lys Asp Ala Tyr Asp Asn Ser
 1 5 10 15
 Asp Glu Ile Ser Glu Lys Ile Asn Cys Ile Ile Ile Ser Ala Thr Leu
 20 25 30
 Val Ile Ile Pro Met Pro Met Glu Val Asn Asn Arg Leu Asp Ala Met
 35 40 45
 Ser Leu Trp
 50

<210> 5791

<211> 44

<212> PRT

<213> S.epidermidis

<400> 5791

Tyr Met Ser Arg Leu Ser Leu Arg Arg Gln Leu Thr Lys Arg Gly Gly
 1 5 10 15
 Ala Leu Ile Ala Asn His Phe Arg Ser His His Asp His Ser Pro Gln
 20 25 30
 Leu Leu Tyr Tyr Cys Ile Ile Tyr Ser Leu Asp Met
 35 40

<210> 5792

<211> 96

<212> PRT

<213> S.epidermidis

<400> 5792

Phe	Val	Ile	Arg	Lys	Ala	Ser	Tyr	Gly	Gln	Thr	Pro	His	Val	His	Phe
1				5				10					15		
Glu	Ile	Val	Pro	Ile	Thr	Glu	Asp	Gly	Arg	Leu	Ser	Ala	Lys	Asp	Val
			20					25					30		
Val	Gly	Asn	Lys	Lys	Ala	Leu	Ala	Ser	Phe	Gln	Asp	Lys	Phe	Asn	Glu
		35				40						45			
Tyr	Val	Asn	Glu	Arg	Gly	Tyr	Glu	Leu	Glu	Gln	Gly	Thr	Ser	Arg	Glu
	50				55						60				
Leu	Thr	Asn	Arg	Gln	His	Asp	Gln	Val	Asn	Ser	Tyr	Lys	Gln	Lys	Thr
65					70					75					80
Glu	Tyr	His	Lys	Lys	Glu	Tyr	Glu	Arg	Arg	Tyr	Lys	Ile	Gln	Pro	Ile
				85				90						95	

<210> 5793

<211> 454

<212> PRT

<213> S.epidermidis

<400> 5793

Lys	Gly	Ile	Arg	Val	Ser	Ile	Ser	Tyr	Ile	Tyr	Lys	Gly	Glu	Thr	Ala
1				5				10					15		
Met	Asn	Lys	Ile	Ile	Ile	Val	Gly	Ala	Val	Ala	Gly	Gly	Ala	Thr	Cys
			20					25					30		
Ala	Ser	Gln	Ile	Arg	Arg	Leu	Asp	Lys	Glu	Ser	Glu	Ile	Ile	Val	Phe
		35				40						45			
Glu	Lys	Asp	Arg	Asp	Met	Ser	Phe	Ala	Asn	Cys	Ala	Leu	Pro	Tyr	Tyr
	50				55					60					
Ile	Gly	Asn	Val	Ile	Glu	Asp	Arg	Arg	Lys	Val	Leu	Ala	Tyr	Thr	Pro
65					70					75					80
Asn	Gln	Phe	Tyr	Asp	Lys	Lys	Gln	Ile	Thr	Val	Lys	Thr	Tyr	His	Glu
				85					90					95	
Val	Ile	Gln	Ile	Asn	Asp	Glu	Arg	Gln	Lys	Val	Thr	Val	Leu	Asn	His
			100					105					110		
Gln	Thr	Asn	Gln	Thr	Phe	Glu	Glu	Ser	Tyr	Asp	Thr	Leu	Ile	Leu	Ser
		115				120						125			
Pro	Gly	Ala	Ser	Ala	Asn	Arg	Leu	Asn	Thr	His	Ser	Asp	Ile	Ser	Phe
	130				135						140				
Thr	Val	Arg	Asn	Leu	Glu	Asp	Thr	Glu	Thr	Ile	Asp	Thr	Phe	Ile	Thr
145					150					155					160
Asn	Thr	Lys	Ala	Gln	Arg	Ala	Leu	Val	Val	Gly	Ala	Gly	Tyr	Ile	Ser
			165					170						175	
Leu	Glu	Val	Leu	Glu	Asn	Leu	His	His	Arg	Gly	Leu	Asp	Val	Thr	Trp
		180						185					190		
Ile	His	Arg	Ser	Thr	Asn	Ile	Asn	Lys	Leu	Met	Asp	Gln	Asp	Met	Asn
	195					200						205			
Gln	Pro	Ile	Ile	Asp	Glu	Ile	Glu	Lys	Arg	Asn	Ile	Thr	Tyr	Arg	Phe
	210					215					220				
Asn	Glu	Glu	Ile	Ser	His	Val	Asn	Gly	His	Glu	Val	Thr	Phe	Thr	Ser
225					230					235					240
Gly	Lys	Val	Glu	Asn	Phe	Asp	Leu	Ile	Ile	Glu	Gly	Val	Gly	Thr	His
				245					250					255	
Pro	Asn	Ser	Gln	Phe	Ile	Lys	Ser	Ser	Asn	Val	Ile	Leu	Asn	Asp	Lys
			260					265					270		

Gly Tyr Ile Pro Val Asn His Asn Phe Gln Thr Asn Ile Pro Asn Ile
 275 280 285
 Tyr Ala Leu Gly Asp Val Ile Thr Ser His Tyr Arg His Val Asn Leu
 290 295 300
 Pro Ala Gln Val Pro Leu Ala Trp Gly Ala His Arg Gly Ala Ser Ile
 305 310 315 320
 Ile Ala Glu Gln Leu Ser Gly Asn Ser Ser Ile His Phe Lys Gly Tyr
 325 330 335
 Leu Gly Asn Asn Ile Val Lys Phe Phe Asp Tyr Thr Leu Ala Ser Val
 340 345 350
 Gly Ile Lys Pro Asn Glu Leu Lys Asn Phe Asp Tyr Asp Met Val Glu
 355 360 365
 Val Lys Gln Gly Ala His Ala Gly Tyr Tyr Pro Gly Asn Ser Pro Leu
 370 375 380
 His Leu Arg Val Tyr Phe Glu Lys Asp Ser Arg Lys Leu Ile Arg Ala
 385 390 395 400
 Ala Ala Val Gly Lys Gln Gly Ala Asp Lys Arg Ile Asp Val Leu Ser
 405 410 415
 Met Ala Met Met Asn Asn Ala Thr Val Asp Asp Leu Thr Glu Phe Glu
 420 425 430
 Val Ala Tyr Ala Pro Pro Tyr Ser His Pro Lys Asp Leu Ile Asn Leu
 435 440 445
 Ile Gly Tyr Lys Ala Gln
 450

<210> 5794

<211> 43

<212> PRT

<213> S.epidermidis

<400> 5794

Ala Thr Pro Arg Leu Ala Asp Thr Val Asn Leu Leu Leu Val Pro Pro
 1 5 10 15
 Asp Gly Leu Glu Gly Cys Asp Gly Phe Val Asp Val Val Pro Gln Gly
 20 25 30
 Ala Thr Cys Phe Val Leu Ile Lys Tyr Phe Ser
 35 40

<210> 5795

<211> 164

<212> PRT

<213> S.epidermidis

<400> 5795

Lys Ala Met Arg Tyr Val Tyr Gly Ser Glu Lys Val Leu Pro Leu Ser
 1 5 10 15
 Lys Lys Thr Ser His His Ala Arg Ile Tyr Ile Gly Gln Pro Thr Lys
 20 25 30
 Ile Phe Asn Thr Arg Arg Cys Phe Leu Met Ser Ser Asp Thr Asn Gly
 35 40 45
 Leu Ala His Thr Lys Trp Asn Cys Lys Tyr His Ile Val Phe Ala Pro
 50 55 60
 Lys Tyr Arg Arg Gln Val Ile Tyr Gly Lys Ile Lys Arg Asp Ile Gly
 65 70 75 80
 Val Ile Leu Arg Gln Leu Cys Glu Arg Lys Gly Val Glu Ile Ile Glu
 85 90 95

Ala Glu Ala Cys Lys Tyr Pro Val Gly Val Val Glu Asp Gln Ile Tyr
 100 105 110
 Tyr Phe Asn Glu Asp Asn Ile Asp Asn Val Ile Phe Glu Gly Tyr Ser
 115 120 125
 Asp Gln Asp Glu Thr Arg Phe Gln Glu Leu Phe Lys Glu Met Met Gly
 130 135 140
 Asn Leu Asp Glu Asp Ile Lys Arg Gly Thr Val Gln Gln Lys Asp Ser
 145 150 155 160
 Tyr Gly Leu Ile

<210> 5796

<211> 500

<212> PRT

<213> S.epidermidis

<400> 5796

Lys Lys Glu Arg Tyr Ile Leu Asn Ala Ser Ala Leu Phe Lys Lys Ile
 1 5 10 15
 Arg Val Lys Asn Val Ile Gly Thr Leu Asp Ile Gln Val Asp Asp Ile
 20 25 30
 Thr Thr Asp Ser Arg Thr Ala Lys Glu Gly Ser Leu Phe Val Ala Ser
 35 40 45
 Lys Gly Tyr Thr Val Asp Ser His Lys Phe Cys Gln Asn Val Val Asp
 50 55 60
 Gln Gly Cys Gly Ile Val Val Val Asn Arg Glu Leu Glu Leu Lys Gly
 65 70 75 80
 Asn Val Thr Gln Val Val Val Pro Asp Thr Leu Arg Val Ala Ser Leu
 85 90 95
 Leu Ala His Glu Leu Tyr Glu Phe Pro Ser His Gln Leu Thr Thr Tyr
 100 105 110
 Gly Val Thr Gly Thr Asn Gly Lys Thr Ser Ile Ala Thr Met Ile His
 115 120 125
 Leu Ile Tyr Arg Lys Leu Asn Lys Asn Ser Ala Tyr Leu Gly Thr Asn
 130 135 140
 Gly Phe Gln Val Asn Glu Thr Lys Thr Lys Gly Ala Asn Thr Thr Pro
 145 150 155 160
 Glu Thr Val Ala Leu Thr Lys Lys Ile Lys Glu Ala Val Asp Ala Asn
 165 170 175
 Ala Glu Ala Met Thr Met Glu Val Ser Ser His Gly Leu Ala Leu Gly
 180 185 190
 Arg Leu Arg Gly Val Glu Phe Asp Val Ala Ile Phe Ser Asn Leu Thr
 195 200 205
 Gln Asp His Leu Asp Phe His Gly Thr Met Glu Ala Tyr Gly His Ala
 210 215 220
 Lys Ser Leu Leu Phe Ser Gln Leu Gly Glu Asp Leu Ser Lys Glu Lys
 225 230 235 240
 Tyr Val Val Leu Asn Asp Asp Asp Phe Ser Asp Tyr Leu Ala Ser
 245 250 255
 Val Thr Pro Tyr Glu Val Phe Thr Tyr Gly Ile Thr His Glu Ala Gln
 260 265 270
 Phe Met Ala Lys Asn Ile Lys Glu Ser Leu Gln Gly Val Glu Phe Glu
 275 280 285
 Phe Cys Thr Pro Phe Gly Ser Phe Pro Val Lys Ser Pro Tyr Val Gly
 290 295 300
 Arg Phe Asn Ile Ser Asn Ile Met Ala Ala Met Ile Ala Val Trp Ser

305 310 315 320
 Lys Gly Thr Asn Leu Asn Glu Ile Ile Asn Ala Val Thr Glu Leu Glu
 325 330 335
 Pro Val Glu Gly Arg Leu Glu Val Leu Asp Pro Ser Leu Pro Ile Asp
 340 345 350
 Leu Ile Ile Asp Tyr Ala His Thr Ala Asp Gly Met Asn Lys Leu Ile
 355 360 365
 Asp Ala Val Gln Pro Phe Val Lys Gln Lys Leu Ile Phe Leu Val Gly
 370 375 380
 Met Ala Gly Glu Arg Asp Leu Thr Lys Thr Pro Glu Met Gly Arg Val
 385 390 395 400
 Ala Cys Arg Ala Asp Tyr Val Ile Phe Thr Pro Asp Asn Pro Ala Asn
 405 410 415
 Asp Asp Pro Lys Met Leu Thr Ala Glu Leu Ala Lys Gly Ala Thr His
 420 425 430
 Asn Asn Tyr Ile Glu Phe Asp Asp Arg Ala Glu Gly Ile Arg His Ala
 435 440 445
 Ile Asp Ile Ala Glu Pro Gly Asp Thr Val Val Leu Ala Ser Lys Gly
 450 455 460
 Arg Glu Pro Tyr Gln Ile Met Pro Gly His Val Lys Val Pro His Arg
 465 470 475 480
 Asp Asp Leu Ile Gly Leu Lys Ala Ala Tyr Gln Lys Phe Gly Gly Gly
 485 490 495
 Pro Leu Glu Asp
 500

<210> 5797

<211> 593

<212> PRT

<213> S.epidermidis

<400> 5797

Arg Asn Tyr Arg Ser Gly Leu Leu Val Asp Asn Asn Lys Lys Gln Val
 1 5 10 15
 Ile Pro Arg Ser Gln Tyr Arg Arg Lys Arg Arg Glu Tyr Phe His Asn
 20 25 30
 Val Glu Arg Glu Glu Arg Ile Arg Arg Glu Lys Ile Glu Lys Glu Asn
 35 40 45
 Gln Ala Lys Arg Glu Gln His Gln Thr Lys Val Asn Glu Glu Arg Val
 50 55 60
 Lys Asp Asn Leu Arg Lys Ala Arg Ile Glu Lys Leu Thr Gln Glu Glu
 65 70 75 80
 Ile His Gln Gln Arg Asp Asp Lys Ser Tyr Lys Gln Lys Thr Leu Asn
 85 90 95
 Gln Asn Asn Gln Met Asn Lys Ser Lys Asp Asp Asp Asn Lys Ile Gly
 100 105 110
 Glu Glu Ser Leu His Asp Val Arg Val Ser Ser Asp Thr Ser Thr Leu
 115 120 125
 Pro His Gln Asn Lys Ser Ile Lys Asp Tyr Asp Asp Ser Gly Asn Glu
 130 135 140
 Ser Lys Gln His Thr Lys Leu Thr Ser Lys Glu Ser Met Leu Gly Val
 145 150 155 160
 Asn Ser Asn His Thr Glu Gln Asp Ser Arg Ser Thr Gln Pro Tyr Ser
 165 170 175
 Ser Lys His Ser Tyr Ser Gln Pro Lys Asp Lys Asp Asn Asp Asn Thr
 180 185 190

Gln Gln Ala Gln Phe Leu Lys Lys Glu Asp Lys Gln Arg Asn Arg Ala
 195 200 205
 Glu Asn Ile Lys Lys Val Asn Glu Phe Lys Gln Leu Val Val Ala Phe
 210 215 220
 Phe Lys Glu His Trp Pro Lys Met Leu Ile Ile Ile Gly Ile Ile Val
 225 230 235 240
 Leu Leu Leu Ile Leu Asn Ala Ile Phe Thr Thr Val Asn Lys Asn Asp
 245 250 255
 His Thr Asn Asp Ser Ala Phe Asn Gly Thr Ala Lys Asp Glu Thr Thr
 260 265 270
 Ala Met Lys Ile Ala Glu Asn Ser Val Lys Ser Val Val Thr Val Glu
 275 280 285
 Asn Asp Leu Ser Asn Asp Thr Thr Val Ser Asp Asn Lys Asn Glu Ser
 290 295 300
 Asp Asn Glu Ile Gly Ser Gly Val Val Tyr Lys Lys Val Gly Asp Ser
 305 310 315 320
 Ile Tyr Ile Phe Thr Asn Ala His Val Val Gly Asp Gln Glu Lys Gln
 325 330 335
 Lys Val Thr Tyr Gly Asn Asp Lys Ser Val Thr Gly Lys Val Ile Gly
 340 345 350
 Lys Asp Lys Trp Ser Asp Leu Ala Val Val Lys Ala Lys Val Ala Asp
 355 360 365
 Glu Asn Ile Lys Pro Met Thr Met Gly Asp Ser Asn Asn Ile Lys Leu
 370 375 380
 Ala Glu Pro Ile Leu Val Ile Gly Asn Pro Leu Gly Thr Asp Phe Lys
 385 390 395 400
 Gly Ser Val Ser Gln Gly Ile Val Ser Gly Leu Asn Arg His Val Pro
 405 410 415
 Val Asp Ile Asp Lys Asn Asp Asn Tyr Asp Ala Leu Met Lys Ala Phe
 420 425 430
 Gln Ile Asp Ala Pro Val Asn Pro Gly Asn Ser Gly Gly Ala Val Val
 435 440 445
 Asp Arg Asp Gly Arg Leu Ile Gly Ile Val Ser Leu Lys Ile Asp Met
 450 455 460
 His Asn Val Glu Gly Met Ala Phe Ala Ile Pro Ile Asn Asp Val Arg
 465 470 475 480
 Lys Ile Ala Lys Glu Leu Glu His Lys Gly Lys Val Asn Tyr Pro Asn
 485 490 495
 Thr Glu Ile Lys Ile Lys Asn Val Gly Asp Leu Asp Asp Ser Glu Arg
 500 505 510
 Asn Ala Ile Asn Leu Pro Ala Lys Val Asn His Gly Val Leu Ile Gly
 515 520 525
 Glu Val Lys Glu Asn Gly Leu Gly Asp Lys Ala Gly Leu Lys Lys Gly
 530 535 540
 Asp Val Ile Val Glu Leu Asp Gly Lys Lys Ile Glu Asp Asn Leu Arg
 545 550 555 560
 Tyr Arg Gln Val Ile Tyr Ser His Tyr Asp Asp Gln Lys Thr Ile Thr
 565 570 575
 Ala Lys Ile Tyr Arg Asn Gly Ala Glu Lys Asn Ile Lys Ile Lys Leu
 580 585 590
 Lys

<210> 5798

<211> 317

<212> PRT

<213> S.epidermidis

<400> 5798

```

Arg Gly Trp Leu Leu Met Ser Asn Glu Asn Val Leu Leu Gln Val Lys
1      5      10      15
Asn Leu Lys Gln Tyr Phe Asn Gln Gly Lys His Asn Glu Val Lys Ala
20      25      30
Ile Asp Asn Ile Ser Phe Asp Val Tyr Lys Gly Glu Thr Leu Gly Leu
35      40      45
Val Gly Glu Ser Gly Cys Gly Lys Ser Thr Thr Gly Lys Ala Ile Ile
50      55      60
Lys Leu Asn Asp Ile Thr Asp Gly Ala Ile Glu Tyr Asp Gly Lys Asp
65      70      75      80
Ile His Gln Ile Arg Lys Arg Lys Glu Arg Leu Lys Phe Asn Lys Lys
85      90      95
Ile Gln Met Ile Phe Gln Asp Pro Tyr Ala Ser Leu Asn Pro Arg Leu
100     105     110
Lys Val Met Asp Ile Val Ala Glu Gly Ile Asp Ile His Lys Leu Ala
115     120     125
Ser Ser Gln Arg Asp Arg Lys Lys Arg Val Tyr Asp Leu Leu Glu Thr
130     135     140
Val Gly Leu Gly Lys Glu His Ala Asn Arg Tyr Pro His Glu Phe Ser
145     150     155     160
Gly Gly Gln Arg Gln Arg Ile Gly Ile Ala Arg Ala Leu Ala Val Glu
165     170     175
Pro Glu Phe Ile Ile Ala Asp Glu Pro Ile Ser Ala Leu Asp Val Ser
180     185     190
Ile Gln Ala Gln Val Val Asn Leu Leu Leu Lys Leu Gln Arg Glu Arg
195     200     205
Asp Ile Thr Leu Leu Phe Ile Ala His Asp Leu Ser Met Val Lys Tyr
210     215     220
Ile Ser Asp Arg Ile Ala Val Met His Phe Gly Lys Ile Val Glu Ile
225     230     235     240
Gly Pro Ala Asp Asp Ile Tyr Asn Tyr Pro Leu His Asp Tyr Thr Lys
245     250     255
Ser Leu Leu Ser Ala Ile Pro Gln Pro Asp Pro Asp Val Glu Arg Asn
260     265     270
Arg Gln Arg Val Leu Tyr His Glu Asp Ala Thr Leu Asn Glu Glu Arg
275     280     285
Gln Leu Asn Glu Ile Arg Pro Gln His Tyr Val Phe Ser Thr Gln Asn
290     295     300
Glu Ala Val Lys Leu Lys Gln Lys Tyr Gly Leu Ser Val
305     310     315

```

<210> 5799

<211> 150

<212> PRT

<213> S.epidermidis

<400> 5799

```

Gly Lys Thr Ser Glu Asn Gly Gly Asp Thr Val Phe Gln Ile Ala Lys
1      5      10      15
Asn Gln Thr Met Leu Asp Asp Cys Phe Glu Ile Arg Lys Cys Val Phe
20      25      30
Val Glu Glu Gln Gly Val Pro Leu Glu Asn Glu Phe Asp Gln Tyr Glu
35      40      45

```

Asp Tyr Ser Phe His Ile Val Gly Tyr Ile Asn Gly Val Pro Met Ala
 50 55 60
 Thr Ala Arg Ile Arg Pro Leu Asn Thr His Ile Cys Lys Ile Glu Arg
 65 70 75 80
 Val Ala Ile Ile Lys Trp Tyr Arg Gly Leu Gly Tyr Gly Lys Asn Leu
 85 90 95
 Ile His Ala Ile Glu Thr Ile Ala Lys Lys His Gln Tyr Asn Glu Leu
 100 105 110
 Thr Met Asn Ala Gln Leu Gln Ala Arg Asp Phe Tyr Leu Lys Leu Gly
 115 120 125
 Tyr Ser Pro Phe Gly Lys Val Phe Leu Glu Glu Asn Ile Asn His Ile
 130 135 140
 Ser Met Asn Lys Phe Leu
 145 150

<210> 5800

<211> 103

<212> PRT

<213> S.epidermidis

<400> 5800

Cys Pro Arg Leu Phe Tyr Cys Lys His Arg Gln Gln Phe Asn Leu Lys
 1 5 10 15
 Thr Arg Leu Ile Ser Ser Tyr Phe Asn Ile Cys Leu Asn Pro Glu Phe
 20 25 30
 Gln Thr Glu Ile Leu Gln Thr Arg Gln Val Gly Val Arg Gly Pro Asn
 35 40 45
 Ile Glu Asn Phe Lys Gln Lys Phe Tyr Arg Gln Gly Lys Leu Gly Phe
 50 55 60
 Gly Val Cys Leu Asp Asn Ala Leu Ile Thr Tyr Ala Pro Leu Lys Pro
 65 70 75 80
 Phe Ile Lys Ile Gln Ser Val Asn Lys Ile Asn Val Tyr Ser Phe Ile
 85 90 95
 Tyr Ile Thr His Leu Ser Leu
 100

<210> 5801

<211> 49

<212> PRT

<213> S.epidermidis

<400> 5801

Gln Ile Leu Arg Phe Phe Glu Asp Asn Thr Lys Ile Val Gln Asn Val
 1 5 10 15
 Phe Lys Phe Ser Phe Val Thr Leu Gln Pro Tyr Leu Ile Asn Asn Glu
 20 25 30
 His Phe Ile Lys Gln Ile Tyr Asp Lys Ala Trp Tyr Cys Thr Pro Tyr
 35 40 45
 Leu

<210> 5802

<211> 90

<212> PRT

<213> S.epidermidis

<400> 5802

Ser Val Ser Arg Val Ile Lys Ile Ala Gln Arg Ile Met Glu Asp Tyr
 1 5 10 15
 Glu Cys Ile Lys Ser Val Ser Ala Leu Glu Asp Lys Glu Lys Glu Ile
 20 25 30
 Arg Glu Lys Asp Asp Leu Leu Asn Lys Ala Val Gly Arg Ile Glu Asn
 35 40 45
 Thr Tyr Asp Asn Phe Asn Arg Leu Tyr Glu Met Ala Lys Pro Phe Lys
 50 55 60
 Glu Asn Val Glu Ile Ala Leu Lys Leu Leu Lys Ile Leu Leu Lys Glu
 65 70 75 80
 Leu Met Lys Lys His Ile Cys Gly Lys Ser
 85 90

<210> 5803

<211> 514

<212> PRT

<213> S.epidermidis

<400> 5803

Ile Glu Ser Arg Lys Thr Phe Ala Ile Ile Ser His Pro Asp Ala Gly
 1 5 10 15
 Lys Thr Thr Leu Thr Glu Lys Leu Leu Tyr Phe Ser Gly Ala Ile Arg
 20 25 30
 Glu Ala Gly Thr Val Lys Gly Lys Lys Thr Gly Lys Phe Ala Thr Ser
 35 40 45
 Asp Trp Met Lys Val Lys Gln Glu Arg Gly Ile Ser Val Thr Ser Ser
 50 55 60
 Val Met Gln Phe Asp Tyr Asp Asp Tyr Lys Ile Asn Ile Leu Asp Thr
 65 70 75 80
 Pro Gly His Glu Asp Phe Ser Glu Asp Thr Tyr Arg Thr Leu Met Ala
 85 90 95
 Val Asp Ser Ala Val Met Val Ile Asp Cys Ala Lys Gly Ile Glu Pro
 100 105 110
 Gln Thr Leu Lys Leu Phe Lys Val Cys Lys Met Arg Gly Ile Pro Ile
 115 120 125
 Phe Thr Phe Ile Asn Lys Leu Asp Arg Val Gly Lys Glu Pro Phe Glu
 130 135 140
 Leu Leu Asp Glu Ile Glu Glu Thr Leu Asn Ile Asp Thr Tyr Pro Met
 145 150 155 160
 Asn Trp Pro Val Gly Met Gly Gln Asn Phe Phe Gly Ile Ile Asp Arg
 165 170 175
 His Ser Lys Thr Ile Glu Pro Phe Arg Asp Glu Glu Asn Leu Leu His
 180 185 190
 Leu Asn Glu Asp Tyr Glu Leu Lys Glu Glu His Ala Ile Lys Asn Asp
 195 200 205
 Ser Ala Phe Glu Gln Ala Ile Glu Glu Met Met Leu Val Asp Glu Ala
 210 215 220
 Gly Glu Ala Phe Asp Asn Glu Ala Leu Leu Asn Gly Glu Leu Thr Pro
 225 230 235 240
 Val Phe Phe Gly Ser Ala Leu Ala Asn Phe Gly Val Gln Asn Phe Leu
 245 250 255
 Asn Ala Tyr Val Asp His Ala Pro Met Pro Asn Ala Arg Gln Thr Lys
 260 265 270
 Glu Glu Val Asp Val Ser Pro Phe Asp Ile Asp Phe Ser Gly Phe Ile
 275 280 285

Phe Lys Ile Gln Ala Asn Met Asp Pro Lys His Arg Asp Arg Ile Ala
 290 295 300
 Phe Met Arg Val Val Ser Gly Ala Phe Glu Arg Gly Met Asp Val Thr
 305 310 315 320
 Leu Gln Arg Thr Asn Lys Lys Gln Lys Ile Thr Arg Ser Thr Ser Phe
 325 330 335
 Met Ala Asp Asp Lys Glu Thr Val Asn His Ala Val Ala Gly Asp Ile
 340 345 350
 Ile Gly Leu Tyr Asp Thr Gly Asn Tyr Gln Ile Gly Asp Thr Leu Val
 355 360 365
 Gly Gly Lys Gln Lys Tyr Ser Phe Gln Glu Leu Pro Gln Phe Thr Pro
 370 375 380
 Glu Ile Phe Met Lys Val Ser Ala Lys Asn Val Met Lys Gln Lys His
 385 390 395 400
 Phe His Lys Gly Ile Glu Gln Leu Val Gln Glu Gly Ala Ile Gln Tyr
 405 410 415
 Tyr Lys Thr Leu His Thr Asn Gln Ile Ile Leu Gly Ala Val Gly Gln
 420 425 430
 Leu Gln Phe Glu Val Phe Glu His Arg Met Asn Asn Glu Tyr Asn Val
 435 440 445
 Asp Val Val Met Glu Pro Val Gly Arg Lys Ile Ala Arg Trp Ile Glu
 450 455 460
 Asn Glu Glu Asp Ile Lys Asp Asn Met Asn Thr Ser Arg Ser Ile Leu
 465 470 475 480
 Val Lys Asp Arg Tyr Asp Asn Tyr Val Phe Leu Phe Glu Asn Glu Phe
 485 490 495
 Ala Thr Arg Trp Phe Glu Glu Lys Phe Ser Asp Ile Lys Leu Tyr Ser
 500 505 510
 Leu Leu

<210> 5804

<211> 161

<212> PRT

<213> S.epidermidis

<400> 5804

Lys Ala Gln Arg Phe Ala Lys Leu Lys Ser Ala Arg Arg Val Ile Ala
 1 5 10 15
 Ile Asp His Val Glu His Arg Leu Ala His Thr Glu Lys Tyr Asn Gly
 20 25 30
 Ala Glu Val Tyr Asn Phe Leu Lys Glu Asp Asp Val Gly Lys Leu Leu
 35 40 45
 His Glu Thr Thr Arg Gly Gly Ala Asp Val Val Ile Asp Cys Val Gly
 50 55 60
 Ile Asp Glu Gln Val Val Gln Asp Asp Leu Glu Val Ser Ser Asn Ser
 65 70 75 80
 Ile Gln Arg Gly Asn Ile Ser Pro Ile Val Thr Ala Thr Glu Ser Val
 85 90 95
 Arg Lys Tyr Gly Thr Ile Gln Leu Ile Gly Val Tyr Gly Thr Ala Ala
 100 105 110
 Asp Asn Ser Gln Leu Asp Leu Ile Phe Asn Arg Asn Val Gln Val Lys
 115 120 125
 Ser Gly Gln Ala Pro Val Ile His Met Met Pro Lys Leu Tyr Asp Met
 130 135 140
 Ile Lys Ile Lys Ser Leu Ile Gln Gln Lys Leu Ser Leu Ile Leu Cys

```
<210> 5805
<211> 44
<212> PRT
<213> S.epidermidis
```

```
<210> 5806
<211> 73
<212> PRT
<213> S.epidermidis
```

```
<210> 5807
<211> 242
<212> PRT
<213> S.epidermidis
```

<400> 5807															
Asp	Asp	Met	Arg	Ile	Glu	Arg	Val	Asp	Asp	Thr	Thr	Val	Lys	Leu	Phe
1				5					10					15	
Ile	Thr	Tyr	Ser	Asp	Ile	Glu	Ala	Arg	Gly	Phe	Ser	Arg	Glu	Asp	Leu
			20					25					30		
Trp	Ser	Asn	Arg	Lys	Arg	Gly	Glu	Glu	Phe	Phe	Trp	Ser	Met	Met	Asp
		35				40						45			
Glu	Ile	Asn	Glu	Glu	Glu	Asp	Phe	Val	Val	Glu	Gly	Pro	Leu	Trp	Ile
	50					55					60				
Gln	Val	His	Ala	Phe	Glu	Lys	Gly	Val	Glu	Val	Thr	Ile	Ser	Lys	Ser
65					70					75				80	
Lys	Asn	Glu	Asp	Ala	Met	Asn	Met	Ser	Asp	Asp	Thr	Asn	His	Gln	
				85					90				95		
Phe	Asp	Asp	Gln	Val	Asn	Glu	Leu	Leu	Ala	Gln	Thr	Leu	Glu	Gly	Glu
			100					105					110		
Glu	Ser	Leu	Glu	Asp	Leu	Phe	Glu	Gln	Arg	Lys	Gln	Gln	Lys	Lys	Asn
		115					120					125			

His Gln Asp Lys Gln Gln Arg Arg Ala His Lys Pro Ser Asn Val Arg
 130 135 140
 Asn Ile Ile Val Lys Phe Asp Asp Leu Glu Gln Val Ile Asp Tyr Ala
 145 150 155 160
 Tyr His Asn Asn Gln Asn Thr Asp Glu Phe Glu Asp Leu Leu Tyr Met
 165 170 175
 Ile Asp Asn Lys Tyr Tyr Tyr Ser Ile His Phe Asp Asp Ser Val Ser
 180 185 190
 Gln Glu Met Ile Asn Asp Ser Tyr Ser Gln Leu Leu Glu Phe Ala Tyr
 195 200 205
 Pro Thr Asp Lys Thr Asn Ile Tyr Leu Asn Asp Tyr Ala Lys Ile Ile
 210 215 220
 Met Ser His Asn Val Thr Ser Gln Val Arg Lys Tyr Phe Thr Asp Thr
 225 230 235 240
 Asn Glu

<210> 5808

<211> 468

<212> PRT

<213> S.epidermidis

<400> 5808

Ile Cys Phe Gly Gly Val Asn Met Ser Asn Glu Thr Glu Met Lys Asp
 1 5 10 15
 Asn Val Arg Glu Asp Val Tyr Asp Lys Glu Leu Phe Asp Arg Leu Leu
 20 25 30
 Asp Gln Asn Asp Ile Asp Glu Phe Arg Lys Glu Phe Leu Glu Leu His
 35 40 45
 Asn Tyr Glu Gln Ser Glu Tyr Phe Glu Asp Thr Asp Asp Glu Asn Arg
 50 55 60
 Gln Lys Ile Phe Glu Phe Leu Ser Pro Lys Glu Val Ala Asn Phe Phe
 65 70 75 80
 Asp Gln Leu Asp Phe Asp Asp Asp Asp Tyr Glu Ser Leu Phe Asp Asn
 85 90 95
 Met Asp Ala Thr Tyr Ala Ser His Val Leu Glu Glu Met Ser Tyr Asp
 100 105 110
 Asn Ala Val Asp Ile Leu Asn Glu Leu Ser Lys Pro Lys Val Ala Ser
 115 120 125
 Leu Leu Thr Leu Met Asn Lys Asp Lys Ala Asn Glu Ile Lys Ala Leu
 130 135 140
 Leu His Tyr Glu Glu Asp Thr Ala Gly Gly Ile Met Thr Thr Glu Phe
 145 150 155 160
 Ile Ser Leu Lys Ser Thr Thr Pro Val Lys Glu Ala Leu Ile His Val
 165 170 175
 Lys Glu Gln Ala Pro Asp Ala Glu Thr Ile Tyr Val Ile Phe Ala Val
 180 185 190
 Asn Glu Asp Glu Gln Leu Val Gly Val Leu Ser Leu Arg Asp Leu Ile
 195 200 205
 Val Ala Glu Asn Asp Ala Tyr Ile Glu Asp Val Met Ser Glu Arg Val
 210 215 220
 Ile Ser Ala Asn Val Gly Asp Asp Gln Glu Asp Ile Ala Gln Leu Met
 225 230 235 240
 Arg Asp Tyr Asp Phe Ile Ala Val Pro Val Val Asp Tyr Gln Asn His
 245 250 255
 Leu Leu Gly Ile Ile Thr Ile Asp Asp Ile Leu Asp Val Met Asp Glu

260 265 270
 Glu Ala Ser Glu Asp Tyr Ser Arg Leu Ala Gly Val Ser Asp Ile Asp
 275 280 285
 Ser Thr Ser Asp Ser Val Phe Lys Thr Ala Ser Lys Arg Leu Pro Trp
 290 295 300
 Leu Ile Val Leu Thr Phe Leu Gly Met Ile Thr Ala Thr Ile Leu Gly
 305 310 315 320
 Ser Phe Glu Asp Thr Leu Ser Gln Val Ala Leu Leu Ala Ala Phe Ile
 325 330 335
 Pro Ile Ile Ser Gly Met Ser Gly Asn Ser Gly Thr Gln Ser Leu Ala
 340 345 350
 Val Ser Val Arg Asn Ile Ser Thr Gly Glu Ile Asn Glu Gln Ser Lys
 355 360 365
 Phe Lys Ile Ala Leu Arg Glu Ala Gly Ser Gly Leu Leu Ser Gly Ile
 370 375 380
 Val Cys Ala Val Ile Leu Phe Leu Ile Ile Val Val Ile Phe Arg Gln
 385 390 395 400
 Pro Leu Leu Ala Leu Ile Val Gly Gly Ser Leu Thr Cys Ala Met Thr
 405 410 415
 Val Gly Thr Leu Val Gly Ser Met Ile Pro Leu Val Met Asn Lys Cys
 420 425 430
 Lys Ile Asp Pro Ala Val Ala Ser Gly Pro Phe Ile Thr Thr Ile Asn
 435 440 445
 Asp Ile Val Ser Met Leu Ile Tyr Phe Gly Leu Ala Thr Ser Phe Met
 450 455 460
 Ser Tyr Leu Thr
 465

<210> 5809

<211> 169

<212> PRT

<213> S.epidermidis

<400> 5809

Met Ile Leu Gly Leu Ala Leu Val Pro Ser Lys Ser Phe Gln Asp Glu
 1 5 10 15
 Val Asn Ala Tyr Arg Lys Arg Tyr Asp Asn His Tyr Ala Gln Ile Met
 20 25 30
 Pro His Ile Thr Ile Lys Pro Gln Phe Glu Ile Asp Asp His Asp Phe
 35 40 45
 Asn Leu Phe Lys Asn Glu Val Lys Asn Arg Ile Ser Ser Ile Lys Pro
 50 55 60
 Val Glu Val His Ala Thr Lys Ala Ser Asn Phe Ala Pro Val Ser Asn
 65 70 75 80
 Val Ile Tyr Phe Lys Val Ala Lys Thr Glu Ser Leu Glu Gln Leu Phe
 85 90 95
 Asn Gln Phe Asn Thr Glu Asp Phe Tyr Gly Ile Ala Glu His Pro Phe
 100 105 110
 Val Pro His Phe Thr Ile Ala Gln Gly Leu Thr Ser Gln Glu Phe Glu
 115 120 125
 Asp Ile Tyr Gly Gln Val Lys Leu Ala Gly Val Asp His Arg Glu Ile
 130 135 140
 Ile Glu Glu Leu Ser Leu Leu Gln Tyr Ser Glu Glu Glu Asp Lys Trp
 145 150 155 160
 Thr Ile Ile Glu Thr Phe Thr Leu Gly
 165

<210> 5810
 <211> 55
 <212> PRT
 <213> S.epidermidis

<400> 5810
 Asn Ile Lys Gly Ala Gly Thr Ile Asn Gly Leu Thr Tyr Arg Pro Ala
 1 5 10 15
 Leu Tyr Ile Gln Pro Leu Tyr Thr Cys Tyr Asn Gln Gly Ile Asn Phe
 20 25 30
 Tyr Glu Gly Gly Phe Gln Glu Lys Ile Phe Lys His Leu Lys Glu Asn
 35 40 45
 Phe Ser Gly Lys Ile Leu Arg
 50 55

<210> 5811
 <211> 548
 <212> PRT
 <213> S.epidermidis

<400> 5811
 Arg Met Lys Gly Phe Lys Val Leu Ile Ile Leu Leu Ser Val Cys Ile
 1 5 10 15
 Ile Leu Ser Ala Cys Ser Asn Lys Gln Ser Leu Tyr Ser Asp Gln Gly
 20 25 30
 Gln Val Phe Arg Lys Val Ile Thr Gln Asp Met Thr Thr Leu Asp Thr
 35 40 45
 Ala Leu Ile Thr Asp Ala Val Ser Gly Asp Ile Ala Ala Gln Ala Phe
 50 55 60
 Glu Gly Leu Tyr Thr Leu Asn Lys Glu Asp Lys Ala Glu Pro Ala Ile
 65 70 75 80
 Ala Lys Ser Phe Pro Lys Lys Ser Asn Gly Gly Lys Thr Leu Thr Ile
 85 90 95
 Asn Leu Arg Lys Asn Ala Lys Trp Ser Asn Gly Asp Ser Val Thr Ala
 100 105 110
 Tyr Asp Phe Val Tyr Ala Trp Arg Lys Val Val Asn Pro Lys Thr Ala
 115 120 125
 Ser Glu Phe Ala Tyr Ile Met Ser Asp Ile Lys Asn Ala Asp Glu Val
 130 135 140
 Asn Ala Gly Lys Lys Ser Val Lys Asp Leu Gly Ile Thr Ala Ile Gly
 145 150 155 160
 Lys Tyr Lys Leu Gln Val Asp Leu Glu Arg Pro Val Pro Tyr Ile Asn
 165 170 175
 Glu Leu Leu Ala Leu Asn Thr Phe Asn Pro Gln Asn Glu Lys Val Ala
 180 185 190
 Lys Lys Phe Gly Glu Gln Tyr Gly Thr Thr Ala Glu Lys Ala Val Tyr
 195 200 205
 Asn Gly Pro Phe Glu Val Thr Asn Trp Lys Val Glu Asp Lys Ile Gln
 210 215 220
 Leu Val Lys Asn Glu Gln Tyr Trp Asp Lys Lys Asn Val Lys Leu Asp
 225 230 235 240
 Lys Val Asn Tyr Lys Val Leu Lys Asp Gln Gln Ala Gly Ala Ser Leu
 245 250 255
 Tyr Asp Thr Gly Ser Val Asp Asp Thr Ile Ile Thr Ser Glu Gln Val
 260 265 270

Asp Lys Tyr Arg Gly Glu Ser Ala Leu Asn Tyr Arg Leu Thr Ala Ala
 275 280 285
 Thr Phe Phe Ile Lys Met Asn Gln Lys Thr Val Pro Glu Phe Lys Asn
 290 295 300
 Lys His Leu Arg Leu Ala Ile Ser Gln Ala Ile Asn Lys Lys Gly Tyr
 305 310 315 320
 Val Asn Ser Val Leu Asn Asp Gly Ser Leu Pro Ser Asn Asn Phe Thr
 325 330 335
 Gly Val Gly Thr Ala Asp Thr Pro Asp Gly Lys Asp Phe Ala Arg Thr
 340 345 350
 Ile Lys Ser Pro Leu Lys Phe Asn Pro Asp Leu Ala Lys Lys Asn Trp
 355 360 365
 Arg Glu Ala Gln Lys Glu Leu Gly Lys Asn Lys Phe Thr Phe Thr Met
 370 375 380
 Asn Thr Gln Asp Thr Pro Ala Ser Lys Ile Ala Ala Glu Tyr Ile Lys
 385 390 395 400
 Ser Gln Ile Glu Ser His Leu Pro Gly Val Thr Leu Lys Ile Lys Gln
 405 410 415
 Met Pro Phe Lys Gln Lys Thr Thr Leu Glu Leu Ala Asn Asn Tyr Glu
 420 425 430
 Ala Ser Tyr Ser Gly Trp Ser Pro Asp Tyr Pro Asp Pro Thr Ala Phe
 435 440 445
 Leu Gln Thr Met Thr Lys Asn Asn Ala Gln Asn Asn Thr Asp Trp Ser
 450 455 460
 Asn Lys Glu Tyr Asp Gln Leu Leu Lys Asp Ala Asn Ser Lys Phe Leu
 465 470 475 480
 Arg Lys Pro Gly Glu Arg Asn Thr Ser Leu Gln Lys Ala Glu Tyr Ile
 485 490 495
 Leu Leu His Glu Ala Pro Val Ala Pro Val Tyr Gln Lys Gly Glu Ala
 500 505 510
 His Leu Thr Asn Pro Gln Val Lys Gly Leu Gln Tyr His Lys Val Gly
 515 520 525
 Pro Glu Thr Thr Leu Lys His Val Tyr Ile Asp Lys Ser Ile Asn Arg
 530 535 540
 Glu Thr Gly Lys
 545

<210> 5812

<211> 67

<212> PRT

<213> S.epidermidis

<400> 5812

Phe Lys Gly Gly Leu Val Met Thr Val Ala Glu Val Gly Asn Ile Val
 1 5 10 15
 Glu Phe Tyr Asp Gly Leu Arg Gly Arg Val Glu Lys Ile Asn Asp Asn
 20 25 30
 Ser Val Ile Val Asp Leu Thr Ile Met Asp Asn Phe Asn Glu Leu Asp
 35 40 45
 Leu Pro Glu Lys Thr Val Ile Asn His Lys Arg Tyr Lys Ile Val Asp
 50 55 60
 Gln Glu Gly
 65

<210> 5813

<211> 139

<212> PRT

<213> S.epidermidis

<400> 5813

```

Lys Asp Gly Gly Thr Asn Met Leu His Val His Ile Leu Ser Trp Val
1          5          10          15
Leu Ala Ile Ile Leu Phe Ile Ala Thr Tyr Leu Asn Tyr Ser Gln Thr
          20          25          30
Gln Gly Ala Ser Pro Tyr Tyr Lys Pro Leu His Met Ala Leu Arg Leu
          35          40          45
Phe Met Leu Leu Thr Leu Ile Ser Gly Phe Trp Glu Leu Ile Glu Glu
          50          55          60
Phe Met Ala Ala Ser Asn Gly Glu Gly Gly Asn His Met Leu Leu Thr
65          70          75          80
Leu Lys Met Leu Cys Gly Leu Ala Val Ile Ala Phe Met Glu Ile Ser
          85          90          95
Ile Ala Lys Arg Lys Lys Gln Gln Thr Ser His Lys Phe Phe Trp Ile
          100          105          110
Thr Ile Ile Leu Ile Ile Ile Thr Met Ala Ile Gly Val Ile Leu Pro
          115          120          125
Trp Gly Pro Ile Ser Lys Ile Phe Gly Ile Ser
          130          135

```

<210> 5814

<211> 55

<212> PRT

<213> S.epidermidis

<400> 5814

```

Ile Ile Ile Leu Lys Phe Ile Asn Leu Pro Arg Thr Ile Tyr Asn Gly
1          5          10          15
Val Cys Val Thr Phe Ser Leu Ile Asn Leu Lys Lys His Phe Leu Ala
          20          25          30
Gln Ile His Glu Ser Lys Lys Cys Phe Phe Tyr Pro Trp Asn Ile Asn
          35          40          45
Asn Lys Met Ile Ala Thr Ile
          50          55

```

<210> 5815

<211> 1162

<212> PRT

<213> S.epidermidis

<400> 5815

```

Gly Asn Val Met Glu Phe Asn Thr Tyr Ile Gly Arg Ala Gly Thr Gly
1          5          10          15
Lys Ser Thr Ala Met Leu Asn Gln Ile Lys Asn Lys Met Lys Gln Asp
          20          25          30
Pro Leu Gly Asp Pro Ile Val Leu Ile Ala Pro Thr Gln Ser Thr Phe
          35          40          45
Gln Leu Glu Gln Ala Phe Val Asn Asp Ser Glu Leu His Gly Ser Leu
          50          55          60
Arg Thr Glu Val Leu His Phe Glu Arg Leu Ser His Arg Val Phe Gln
65          70          75          80
Glu Val Gly Gly Leu Thr Glu Gln Arg Leu Ser Lys Asp Ala Leu Glu
          85          90          95

```

Met	Met	Ile	Phe	His	Ile	Val	Gln	Gln	His	Glu	Ser	Asp	Leu	Lys	Leu
			100					105					110		
Tyr	Gly	Ser	Gln	Ala	Gln	Tyr	Tyr	Gly	Leu	Ser	Glu	Lys	Leu	Ala	Glu
		115					120					125			
Gln	Ile	Gln	Asp	Phe	Lys	Lys	Tyr	Asn	Val	Thr	Pro	Glu	His	Leu	Asn
	130					135					140				
Gln	Leu	Ile	Glu	Asn	His	Ser	Ile	Gln	Thr	Arg	Thr	Lys	His	Lys	Leu
145					150					155					160
Glu	Asp	Ile	Ser	Leu	Ile	Tyr	Lys	Gln	Leu	Glu	Ser	Arg	Met	Asn	Gly
			165					170						175	
Glu	Phe	Ile	Thr	Thr	Glu	Asp	Ser	Leu	Gln	Gln	Phe	Ile	Glu	Ile	Leu
			180					185					190		
Ser	Gln	Ser	Gln	Trp	Ile	Lys	Lys	Ala	Glu	Val	Phe	Ile	Asp	Gly	Phe
		195					200					205			
His	Asn	Phe	Ser	Thr	Leu	Glu	Tyr	Arg	Ile	Ile	Glu	Ala	Leu	Val	Gln
	210					215					220				
His	Ala	Lys	Gln	Val	Thr	Val	Leu	Leu	Thr	Thr	Asp	Gly	Ser	His	His
225					230					235					240
Pro	Phe	Ser	Leu	Phe	Arg	Lys	Pro	Ser	Glu	Val	Leu	Ser	His	Leu	Glu
			245						250					255	
Asp	Ile	Ala	Asn	Arg	Leu	Asn	Ile	Asn	Leu	Asn	Lys	Thr	Tyr	Phe	Asn
		260					265						270		
Thr	Phe	Tyr	Arg	Tyr	Asn	Asn	Asp	Asp	Leu	Lys	Asn	Leu	Glu	Asn	Gly
	275					280						285			
Phe	Asp	Ala	Leu	Gln	Phe	Thr	Pro	Lys	His	His	Gln	Asn	His	Val	Lys
	290					295					300				
Ile	Phe	Glu	Ser	Ser	Ser	Met	Arg	Glu	Glu	Ile	Asn	Glu	Val	Ala	Arg
305					310					315					320
Arg	Ile	Leu	Lys	Asp	Val	Arg	Glu	Ala	Asp	Tyr	Lys	Phe	Arg	Asp	Ile
			325					330						335	
Ala	Ile	Leu	Tyr	Arg	Asp	Glu	Ser	Tyr	Ala	Tyr	Leu	Phe	Glu	Ser	Ile
		340						345					350		
Leu	Pro	Ser	Tyr	Asp	Ile	Pro	Phe	Asn	Ile	Asp	Thr	Lys	Lys	Ser	Met
		355					360					365			
Thr	His	His	Pro	Ile	Met	Glu	Met	Leu	Arg	Ser	Leu	Leu	Glu	Val	Ile
	370				375						380				
Arg	Ser	Asn	Trp	His	Ile	Asn	Ala	Met	Leu	Arg	Leu	Phe	Lys	Thr	Asn
385					390					395					400
Val	Leu	Thr	Ser	Gln	Phe	Lys	Arg	Ser	Ser	Tyr	Leu	Ile	Asp	Leu	Leu
			405						410					415	
Glu	Asn	Phe	Val	Leu	Glu	Arg	Gly	Ile	Tyr	Gly	Lys	Arg	Trp	Leu	Asp
		420					425						430		
Glu	Asp	Ile	Phe	Ser	Ile	Asp	Gln	Phe	Ser	Arg	Met	Gly	Arg	Lys	Ser
	435					440						445			
His	Gln	Leu	Thr	Glu	Gly	His	Gln	Ala	Leu	Tyr	Lys	Glu	Val	Ile	Lys
	450				455						460				
Leu	Lys	Lys	Asn	Val	Ile	Asn	Lys	Val	Leu	Tyr	Phe	Glu	Gln	Ala	Met
465					470					475					480
Asn	Glu	Ala	His	Thr	Val	Lys	Asp	Tyr	Ala	Thr	Ser	Phe	Tyr	Glu	Ser
			485						490					495	
Leu	Glu	Tyr	Phe	Glu	Leu	Pro	Ser	Gln	Leu	Met	Thr	Gln	Arg	Asp	Glu
		500						505					510		
Leu	Glu	Leu	Ala	Gly	Leu	Thr	Glu	Lys	Ala	Glu	Glu	Ile	Asp	Gln	Val
		515					520					525			
Trp	Asn	Gly	Leu	Ile	Gln	Ile	Leu	Asp	Asp	Leu	Val	Thr	Val	Phe	Asp
	530					535					540				

Asp Gln Glu Met Thr Leu Gln Gln Phe Leu Asp Val Phe Asp Ile Gly
 545 550 555 560
 Leu Glu Gln Leu Glu Phe Val Met Ile Pro Gln Thr Leu Asp Gln Val
 565 570 575
 Ser Ile Gly Thr Met Asp Leu Ala Lys Val Asp Asn Lys Lys His Ile
 580 585 590
 Tyr Met Val Gly Met Asn Asp Gly Ile Leu Pro Gln Thr Val Ser Ser
 595 600 605
 Ser Ser Leu Ile Thr Asp Glu Glu Lys Lys Tyr Val Glu Asp Asn Ala
 610 615 620
 His Val Glu Leu Ser Pro Thr Ser Asp Ile Leu Gln Met Asp Glu Ala
 625 630 635 640
 Phe Val Cys Tyr Ile Ala Met Thr Arg Ser Gln Gln Ser Val Thr Phe
 645 650 655
 Ser Tyr Ser Leu Met Gly Asn Ser Gly Asp Glu Lys Glu Ile Ser Pro
 660 665 670
 Phe Leu Thr Gln Ile Lys Glu Leu Phe Tyr Asp Leu Glu Ile Ile Asn
 675 680 685
 Leu Gln Asp Leu His Lys Ala Gln Pro Leu Leu Met Met Gln His Ser
 690 695 700
 His Gln Thr Lys Ile Gln Leu Phe Glu Tyr Leu Arg Gly Trp Leu Asp
 705 710 715 720
 His Glu Asp Ile Asp Tyr Arg Trp Leu Asp Ala Tyr Leu Ala Ile Arg
 725 730 735
 Asp Asp Asp Gln Leu Asn Gln Gly Leu Asp Tyr Leu Thr Thr Ser Leu
 740 745 750
 Thr Tyr Asp Asn Glu Thr Val Gln Leu Asn Glu Ile Leu Ser Gln Gln
 755 760 765
 Leu Tyr Gly Lys Thr Ile Asn Ala Ser Val Ser Arg Phe Glu Gly Tyr
 770 775 780
 Gln Gln Cys Pro Phe Lys His Tyr Ala Ser His Gly Leu Arg Leu Asn
 785 790 795 800
 Glu Arg Thr Lys Tyr Glu Leu Gln Asn Phe Asp Leu Gly Asp Ile Phe
 805 810 815
 His Ser Val Leu Lys Tyr Ile Ser Asp Arg Ile Tyr Gly Asp Phe Lys
 820 825 830
 Asn Leu Asp Thr Lys Asn Ile Gln Ser Leu Thr Lys Glu Ala Leu Glu
 835 840 845
 Leu Ile Leu Pro Lys Val Gln Phe Asn Leu Leu Asn Ser Ser Ala Tyr
 850 855 860
 Tyr Lys Tyr Leu Ser Lys Lys Ile Gly Ser Ile Val Glu Thr Thr Leu
 865 870 875 880
 Lys Ala Leu Lys Tyr Gln Gly Glu Tyr Ser Lys Phe Val Pro Gln Arg
 885 890 895
 Phe Glu Thr Gly Phe Arg Lys Ser Pro Lys Asn Lys Gly Glu Leu Val
 900 905 910
 Ala Gln Pro Leu Ile Thr Asn Gln Gly Ile Pro Ile Asn Ile Arg Gly
 915 920 925
 Gln Ile Asp Arg Ile Asp Thr Tyr Thr Lys Gly Asp His Ser Tyr Val
 930 935 940
 Asn Ile Ile Asp Tyr Lys Ser Ser Glu Ser Ser Ala Thr Leu Asp Leu
 945 950 955 960
 Thr Lys Val Tyr Tyr Gly Leu Gln Met Gln Met Met Thr Tyr Met Asp
 965 970 975
 Ile Val Leu Gln Asn Lys Glu Arg Leu Gly Leu Thr Asp Ile Val Lys
 980 985 990

Pro Gly Gly Leu Leu Tyr Phe His Val His Glu Pro Arg Ile Lys Phe
 995 1000 1005
 Lys Ser Trp Ala Asp Ile Asp Glu Asp Gln Phe Gln Lys Asp Tyr Ile
 1010 1015 1020
 Lys Asn Phe Lys Met Ser Gly Leu Leu Asn Arg Asp Gln Glu Val Leu
 1025 1030 1035 1040
 Asp Ala Leu Asp Ile Arg Leu Glu Pro Lys Tyr Asn Ser Asp Ile Val
 1045 1050 1055
 Pro Ile Ala Leu Thr Ala Lys Gly Ala Ile Asn Gln Arg Ser Ser Lys
 1060 1065 1070
 Val Ala Asp Glu Asn Ile Ile Tyr Gln Leu Ile Glu His Asn Lys Lys
 1075 1080 1085
 Asn Phe Ile Glu Thr Ala Ser His Ile Met Asp Gly His Thr Glu Val
 1090 1095 1100
 Ala Pro Leu Lys Tyr Lys Gln Val Leu Pro Cys Gln Phe Cys Asn Tyr
 1105 1110 1115 1120
 Lys Ser Val Cys His Val Asp Gly Leu Ile Asp Ser Lys Arg Tyr Arg
 1125 1130 1135
 Thr Val Asp Glu Ser Ile Lys Pro Leu Asp Leu Ile Gln Gln Leu Arg
 1140 1145 1150
 Asn Glu Gly Gly Glu Arg His Asp Ser Asn
 1155 1160

<210> 5816

<211> 260

<212> PRT

<213> S.epidermidis

<400> 5816

Gly Val Thr Ile Met Leu Asn Leu Glu Asn Lys Thr Tyr Val Ile Met
 1 5 10 15
 Gly Ile Ala Asn Lys Arg Ser Ile Ala Phe Gly Val Ala Lys Val Leu
 20 25 30
 Asp Arg Leu Gly Ala Lys Leu Val Phe Thr Tyr Arg Lys Glu Arg Ser
 35 40 45
 Arg Lys Glu Leu Glu Lys Leu Leu Glu Gln Leu Asn Gln Ser Glu His
 50 55 60
 His Leu Tyr Glu Ile Asp Val Gln Asn Asp Glu Asp Ile Ile Asn Gly
 65 70 75 80
 Phe Ser Gln Ile Gly Lys Asp Val Gly Gln Ile Asp Gly Val Tyr His
 85 90 95
 Ser Ile Ala Phe Ala Asn Met Glu Asp Leu Arg Gly Arg Phe Ser Glu
 100 105 110
 Thr Ser Arg Glu Gly Phe Leu Leu Ala Gln Glu Ile Ser Ser Tyr Ser
 115 120 125
 Leu Thr Leu Val Ala His Glu Ala Lys Lys Leu Met Pro Glu Gly Gly
 130 135 140
 Ser Ile Val Ala Thr Thr Tyr Ile Gly Gly Glu Ala Ala Val Gln Asn
 145 150 155 160
 Tyr Asn Val Met Gly Val Ala Lys Ala Ser Leu Glu Ala Asn Val Lys
 165 170 175
 Tyr Leu Ala Leu Asp Leu Gly Glu Asp Asn Ile Arg Val Asn Ala Ile
 180 185 190
 Ser Ala Gly Pro Ile Arg Thr Leu Ser Ala Lys Gly Val Gly Gly Phe
 195 200 205
 Asn Thr Ile Leu Lys Glu Ile Glu Ala Arg Ala Pro Leu Lys Arg Asn

210		215		220
Val Asp Gln Glu Glu	Val Gly Lys Thr Ala	Ala Tyr Leu Leu Ser Asp		
225	230	235	240	
Leu Ser Ser Gly Val	Thr Gly Glu Asn Ile	His Val Asp Gly Gly Phe		
	245	250	255	
His Ala Ile Lys				
260				

<210> 5817
 <211> 148
 <212> PRT
 <213> S.epidermidis

<400> 5817
Leu Gln Tyr Ile Asp Gly Leu Ile Asp Lys Gln Leu Ile Asp Glu Asp
1 5 10 15
Ala Lys Glu Asp Val Arg Arg Asp Glu Ile Met His Phe Ile Asp Gly
20 25 30
Pro Leu Tyr Met Glu Ile Ala Gln Ala Asp Asn Val Tyr Thr Glu Leu
35 40 45
Pro Phe Val Val Asn Gln Ile Lys Val Asp Gly Leu Thr Ser Glu Asp
50 55 60
Glu Asp Val Ser Ile Ile Gln Gly Met Ile Asp Leu Ile Tyr Glu Ser
65 70 75 80
Asp Gly Gln Phe Tyr Phe Val Asp Tyr Lys Thr Asp Ala Phe Asn Arg
85 90 95
Arg Lys Gly Met Ser Asp Glu Glu Ile Gly Asn Gln Leu Lys Glu Lys
100 105 110
Tyr Gln Ile Gln Met Thr Tyr Tyr Arg Asn Thr Leu Glu Thr Ile Leu
115 120 125
Lys Arg Pro Val Lys Gly Tyr Leu Tyr Phe Phe Lys Phe Gly Thr Leu
130 135 140
Glu Ile Asp Asp
145

<210> 5818
 <211> 617
 <212> PRT
 <213> S.epidermidis

<400> 5818
Gly Gly His Met Glu Phe Leu Ser Leu Val Ile Val Val Val Ala Ala
1 5 10 15
Phe Met Thr Pro Ile Ile Val His Arg Phe Asn Ile Asn Phe Leu Pro
20 25 30
Val Val Val Ala Glu Ile Leu Met Gly Ile Val Ile Gly His Ser Phe
35 40 45
Leu Asn Leu Val Glu Arg Asp Ala Phe Leu Asn Ile Leu Ser Thr Leu
50 55 60
Gly Phe Ile Phe Leu Met Phe Leu Ser Gly Leu Glu Ile Asp Phe Asn
65 70 75 80
Ala Phe Lys Lys Asp Ser Arg Pro Arg Gln Gly Glu Asp Lys His Glu
85 90 95
Lys Asp Val Pro Gly His Leu Lys Leu Ala Leu Thr Val Phe Ala Phe
100 105 110
Ile Met Met Ile Ser Val Val Leu Ala Phe Ala Phe Lys Trp Leu Gly

115	120	125
Leu Val Asn Asp Val Leu Leu Met Val Ile Ile Ile Ser Thr Ile Ser		
130	135	140
Leu Gly Val Val Val Pro Thr Leu Lys Glu Met Asn Ile Met Arg Thr		
145	150	155
Thr Ile Gly Gln Phe Ile Leu Leu Val Ala Val Leu Ala Asp Leu Phe		160
	165	170
Thr Met Ile Leu Leu Thr Val Tyr Gly Ala Ile Tyr Gly Glu Gly Gly		175
	180	185
Ser Thr Ile Trp Leu Thr Gly Ile Leu Val Val Phe Thr Val Val Phe		190
	195	200
Tyr Val Ile Gly Val Leu Phe Lys Arg Met Ser Phe Leu Gln Lys Leu		205
210	215	220
Met Asp Gly Thr Thr Gln Ile Gly Ile Arg Ala Val Phe Ala Leu Ile		
225	230	235
Ile Leu Leu Val Ala Leu Ala Glu Gly Val Gly Ala Glu Tyr Ile Leu		240
	245	250
Gly Ala Phe Leu Ala Gly Val Val Val Ser Leu Leu Lys Pro Asn Glu		255
	260	265
Glu Met Val Glu Lys Leu Asp Ser Phe Gly Tyr Gly Phe Phe Ile Pro		270
	275	280
Ile Phe Phe Ile Met Val Gly Val Asp Leu Asp Ile Pro Ser Leu Ile		285
290	295	300
Lys Glu Pro Ser Leu Leu Ile Ile Pro Val Leu Ile Phe Ser Phe		
305	310	315
Ile Ile Ser Lys Leu Ile Pro Val Phe Tyr Ile Arg Arg Trp Phe Asp		320
	325	330
Thr Lys Thr Thr Ile Ala Ser Ala Phe Leu Leu Thr Ser Thr Leu Ser		335
	340	345
Leu Val Ile Ala Ala Ala Lys Ile Ala Glu Lys Leu Lys Ala Ile Ser		350
	355	360
Pro Glu Thr Ser Gly Ile Leu Ile Leu Ser Ala Val Ile Thr Cys Val		365
370	375	380
Phe Val Pro Val Ile Phe Lys Lys Met Phe Pro Ile Pro Asn Glu Val		
385	390	395
Gly Arg Arg Ile Glu Val Ser Met Ile Gly Lys Asn Gln Leu Thr Ile		400
	405	410
Pro Ile Ala Gln Asn Leu Thr Ser Gln Leu Tyr Asp Ile Ser Leu Tyr		415
	420	425
Tyr Arg Lys Asp Leu Ser Asp Ser Arg Lys Leu Ser Asp Asp Ile Thr		430
435	440	445
Met Ile Glu Ile Ala Asp Tyr Glu Glu Asp Leu Leu Glu Arg Leu Gly		
450	455	460
Leu Phe Glu Arg Asp Ile Val Val Cys Ser Thr Asn Asp Asp His Ile		465
465	470	475
Asn Lys Ser Val Ala Leu Met Ala Lys Lys His Gly Val Lys Arg Val		480
	485	490
Ile Cys Arg Leu Glu Ser Thr Asn Glu Asp Pro Thr Leu Lys His Gln		495
	500	505
Gly Ile Glu Val Phe Ser Asn Tyr Leu Ser Asn Lys Ile Leu Leu Lys		510
	515	520
Ser Leu Ile Glu Thr Pro Asn Met Leu Asn Leu Leu Ser Asn Val Glu		525
530	535	540
Thr Ser Leu Tyr Glu Ile Gln Met Leu Asn Tyr Gln Tyr Glu Asn Ile		
545	550	555
Gln Leu Arg Asn Phe Pro Phe Gly Gly Asp Ile Ile Phe Val Arg Ile		560

Ile Arg Asp Asn Asp Ser Ile Val Pro His Gly Asp Thr Gln Leu Arg
 565 570 575
 Tyr Lys Asp Arg Leu Ile Val Thr Gly Thr Lys Glu Tyr Val Asp Glu
 580 585 590
 Leu Lys Gln Glu Leu Glu Phe Tyr Tyr
 595 600 605
 610 615

<210> 5819
 <211> 92
 <212> PRT
 <213> S.epidermidis

<400> 5819
 Lys Gln His Ile Lys Asn Leu Val Val Asp Leu Leu Arg Ile Lys Ser
 1 5 10 15
 Leu Gln Phe His Gly Met Met Ile Asn Val Tyr His Tyr His Ser Asn
 20 25 30
 Asp Leu Ile Met Leu Ala Ile Pro Glu Leu Phe Trp Ser Ile Glu Leu
 35 40 45
 Ser Lys Glu Leu Asp Ala Asn Gln Leu Tyr Glu Glu Leu Val Met Gln
 50 55 60
 Leu Phe Asn Leu Leu Thr Glu Val Glu Ala Asp Thr Leu Ala Ser Asn
 65 70 75 80
 Ile Thr Asp Leu Ile Arg Asn Glu Ser Lys Gly Glu
 85 90

<210> 5820
 <211> 332
 <212> PRT
 <213> S.epidermidis

<400> 5820
 Ala Ser Asn Met Glu Thr Leu Phe Ser Gly Ile Gln Pro Ser Gly Ile
 1 5 10 15
 Pro Thr Ile Gly Asn Tyr Ile Gly Ala Leu Lys Gln Phe Val Asp Val
 20 25 30
 Gln Asp Asp Tyr Glu Cys Phe Phe Cys Ile Val Asp Gln His Ala Ile
 35 40 45
 Thr Val Pro Gln Asp Arg Leu Lys Leu Arg Lys Gln Ile Arg Gln Leu
 50 55 60
 Ala Ala Ile Tyr Leu Ala Thr Gly Ile Asp Pro Asp Lys Ser Thr Leu
 65 70 75 80
 Phe Ile Gln Ser Glu Val Pro Ala His Val Gln Ala Gly Trp Met Leu
 85 90 95
 Thr Thr Ile Ala Ser Ile Gly Glu Leu Arg Met Thr Gln Phe Lys
 100 105 110
 Asp Lys Ala Gln Lys Arg Ala Asp Gly Val Pro Ala Gly Leu Leu Thr
 115 120 125
 Tyr Pro Pro Leu Met Ala Ala Asp Ile Val Ile Tyr Asn Thr Asn Ile
 130 135 140
 Val Pro Val Gly Asp Asp Gln Lys Gln His Met Glu Leu Thr Arg Asn
 145 150 155 160
 Leu Val Asp Arg Phe Asn Ser Arg Tyr Asn Asp Val Leu Val Lys Pro
 165 170 175
 Glu Val Arg Met Pro Lys Val Gly Gly Arg Val Met Ser Leu Gln Asp

Tyr Gly Gly Asn His Pro Cys Val His Gly Gln Ala Leu His Cys Cys
 245 250 255
 Ser Val Glu Phe Ile His Pro Ile Tyr Arg Ser His Tyr Leu Ile Asn
 260 265 270
 Val Asp Tyr Lys Gln Leu Ile Lys Leu Phe Asn Met Val
 275 280 285

<210> 5822

<211> 404

<212> PRT

<213> S.epidermidis

<400> 5822

Gly Val Asn Met Lys Asp Lys Ile Val Leu Ala Tyr Ser Gly Gly Leu
 1 5 10 15
 Asp Thr Ser Val Ala Val Gln Trp Leu Ile Asp Lys Gly Tyr Asp Val
 20 25 30
 Val Ala Cys Cys Leu Asp Val Gly Glu Gly Lys Asp Leu Asp Val Val
 35 40 45
 Tyr Gln Lys Ala Leu Asp Met Gly Ala Val Glu Cys His Ile Ile Asp
 50 55 60
 Ala Thr Lys Glu Phe Ser Asp Asp Tyr Val Ser Tyr Ala Ile Lys Gly
 65 70 75 80
 Asn Leu Met Tyr Glu Asn Ala Tyr Pro Leu Val Ser Ala Leu Ser Arg
 85 90 95
 Pro Leu Ile Ala Lys Lys Leu Val Glu Ile Ala Glu Lys Thr Asn Ser
 100 105 110
 Ile Gly Ile Ala His Gly Cys Thr Gly Lys Gly Asn Asp Gln Val Arg
 115 120 125
 Phe Glu Val Ala Ile Lys Ala Leu Asn Pro Lys Leu Lys Ala Phe Ala
 130 135 140
 Pro Val Arg Glu Trp Ala Trp Ser Arg Glu Glu Glu Ile Asp Tyr Ala
 145 150 155 160
 Ile Lys His Asn Ile Pro Val Ser Ile Asn Tyr Asp Ser Pro Tyr Ser
 165 170 175
 Ile Asp Gln Asn Leu Trp Gly Arg Ala Asn Glu Cys Gly Ile Leu Glu
 180 185 190
 Asp Pro Tyr Ala Ala Pro Pro Glu Asp Ala Phe Asp Leu Thr Thr Pro
 195 200 205
 Leu Glu Glu Thr Pro Asp Asn Ala Asp Glu Ile Ile Leu Thr Phe Lys
 210 215 220
 Gln Gly Ile Pro Val Gln Val Asp Gly Lys Asp Tyr Gln Leu Asp Asp
 225 230 235 240
 Leu Ile Leu Tyr Leu Asn Gln Leu Ala Gly Lys His Gly Ile Gly Arg
 245 250 255
 Ile Asp His Val Glu Asn Arg Met Val Gly Ile Lys Ser Arg Glu Ile
 260 265 270
 Tyr Glu Thr Pro Gly Ala Glu Val Ile Leu Lys Ala His Lys Ala Leu
 275 280 285
 Glu Thr Ile Thr Leu Thr Lys Asp Val Ala His Phe Lys Pro Val Ile
 290 295 300
 Glu Lys Gln Phe Ser Glu Gln Ile Tyr Asn Gly Leu Trp Phe Ser Pro
 305 310 315 320
 Leu Thr Asp Ser Leu Lys Leu Phe Ile Asp Ser Thr Gln Gln Tyr Val
 325 330 335
 Glu Gly Asp Val Arg Ile Lys Leu Phe Lys Gly Asn Ala Ile Val Asn

			340					345				350					
Gly	Arg	Gln	Ser	Pro	Tyr	Thr	Leu	Tyr	Asp	Glu	Lys	Leu	Ala	Thr	Tyr		
		355					360					365					
Thr	Lys	Glu	Asp	Ala	Phe	Asn	Gln	Glu	Ser	Ala	Val	Gly	Phe	Ile	Asp		
	370					375					380						
Ile	Tyr	Gly	Leu	Pro	Thr	Gln	Val	Asn	Ala	Leu	Leu	His	Gly	Gly	Tyr		
385					390					395					400		
Ser	Asn	Glu	Gln														

<210> 5823

<211> 263

<212> PRT

<213> S.epidermidis

<400> 5823

Tyr	Asn	Ser	Ile	Asn	Ile	Thr	Arg	Glu	His	Arg	Phe	Met	Ser	Glu	Phe		
1				5					10					15			
Lys	Val	Gly	Lys	Ile	Asn	Lys	Lys	Ile	Ile	His	Ser	Asp	Ile	Leu	Asn		
			20					25					30				
Arg	Asp	Val	Thr	Leu	Ser	Val	Tyr	Leu	Pro	Glu	Asp	Tyr	Thr	Asn	Leu		
		35				40						45					
Phe	Lys	Tyr	Gln	Leu	Ile	Phe	Cys	Phe	Asp	Gly	Leu	Asp	Phe	Phe	Arg		
	50				55					60							
Phe	Gly	Arg	Ile	Gln	Arg	Ile	Tyr	Glu	Gln	Leu	Arg	Glu	Glu	Gln	Ser		
65				70					75					80			
Ile	Gln	Arg	Ala	Ile	Ile	Val	Gly	Phe	His	Tyr	Glu	Asp	Val	Glu	Lys		
			85					90					95				
Arg	Arg	Glu	Glu	Phe	His	Pro	Ser	Gly	Ser	Arg	Ser	Asn	Leu	Thr	Ile		
		100						105					110				
Lys	Ala	Met	Gly	Lys	Glu	Ile	Leu	Pro	Tyr	Ile	Asp	Ala	Thr	Phe	Pro		
		115				120						125					
Thr	Tyr	Lys	Val	Gly	Asn	Thr	Arg	Leu	Leu	Ile	Gly	Asp	Ser	Leu	Ala		
	130				135						140						
Gly	Ser	Ile	Ala	Leu	Met	Thr	Ala	Met	Thr	Tyr	Pro	Thr	Ile	Phe	Ser		
145				150					155					160			
Arg	Val	Ala	Leu	Leu	Ser	Pro	Met	Tyr	Asn	Glu	Asn	Ile	Lys	Lys	Lys		
			165					170					175				
Ile	Asp	Thr	Cys	Met	Asn	Lys	Gly	Gln	Leu	Thr	Ile	Trp	His	Ala	Ile		
		180					185					190					
Gly	Leu	Glu	Glu	Ala	Asp	Phe	Ile	Leu	Pro	Thr	Asn	Gly	Lys	Arg	Ala		
	195				200						205						
Asn	Phe	Leu	Thr	Pro	Asn	Arg	Glu	Leu	Asn	Gln	Leu	Ile	Lys	Glu	Asp		
	210				215						220						
Asn	Ile	Glu	Tyr	Phe	Tyr	Lys	Glu	Phe	Asn	Gly	Gly	His	His	Trp	Lys		
225				230						235				240			
Ser	Trp	Lys	Pro	Leu	Gly	Asp	Ile	Leu	Leu	Gln	Phe	Leu	Gly	Asp			
			245					250					255				
Pro	Ile	Asn	Gly	Lys	Tyr	Val											
		260															

<210> 5824

<211> 201

<212> PRT

<213> S.epidermidis

Tyr 1	Ala	Ile	Ile	Asn 5	Val	Ile	Lys	Phe	Ile 10	Lys	Gly	Gly	Gln	Leu 15	Met
Asp	Phe	Ile	Asn 20	Ile	Thr	Gly	Ala	Ser 25	Gln	Asn	Asn	Leu	Lys 30	Asn	Ile
Asp	Val	Asn 35	Ile	Pro	Lys	His	Leu 40	Val	Thr	Val	Phe	Thr	Gly	Arg	Ser
Gly 50	Ser	Gly	Lys	Ser	Ser	Leu 55	Val	Phe	Asn	Thr	Val	Ala	Ala	Glu	Ser
Glu 65	Gln	Leu	Leu	Asn 70	Glu	Ser	Tyr	Ser	Ser	Tyr 75	Ile	Gln	Phe	His	Leu 80
Asn	Gln	Gln	Pro	Arg 85	Pro	Lys	Val	Lys	Lys 90	Ile	Lys	Asn	Leu	Pro 95	Val
Ala	Met	Thr	Ile 100	Asn	Gln	Lys	Arg	Phe 105	Asn	Gly	Asn	Ser	Arg	Ser	Thr
Val	Gly	Thr 115	Val	Ser	Asp	Ile	Tyr 120	Ala	Ser	Val	Arg	Leu	Leu	Trp	Ser
Arg	Ile 130	Gly	Glu	Pro	Phe	Val 135	Gly	Tyr	Ser	Asp	Ala 140	Tyr	Ser	Phe	Asn
Ser 145	Pro	Lys	Gly	Met 150	Cys	Lys	Thr	Cys	Glu	Gly 155	Leu	Gly	Tyr	Ile	Glu 160
Asp	Ile	Asn	Leu	Asp 165	Glu	Leu	Leu	Asp	Trp 170	Asp	Lys	Ser	Leu	Asn 175	Glu
Gly	Ala	Ile	Asp 180	Phe	Pro	Ser	Phe	Gly 185	Pro	Asp	Lys	Glu	Arg	Gly	Lys
Ala	Tyr	Arg 195	Asp	Ser	Gly	Leu	Phe 200	Asp	Asn	Asn	Lys	Lys 205	Leu	Lys	Asp
Tyr	Thr 210	Lys	Asp	Glu	Leu	Glu 215	Leu	Phe	Leu	Tyr	Gln 220	Glu	Pro	Met	Thr
Leu 225	Lys	Asn	Pro	Pro 230	Lys	Glu	Trp	Arg	Lys	Ser 235	Ala	Lys	Tyr	Val	Gly 240
Leu	Ile	Pro	Arg	Phe 245	Ser	Arg	Ile	Phe	Leu	Gly 250	Asp	Lys	Glu	Phe 255	Asn
Lys	Lys	Arg	Tyr 260	Ala	Lys	His	Leu	Lys 265	Asn	Val	Val	Asn	Asn	Lys	Ile
Cys	Ser	Thr 275	Cys	Lys	Gly	Gln	Arg 280	Leu	Asn	Ser	Lys	Ile	Leu	Ser	Ser
Lys	Ile 290	Met	Ser	Lys	Asn	Ile 295	Ser	Asp	Phe	Thr	Gln 300	Met	Thr	Ile	Lys
Glu 305	Asn	Leu	Glu	Phe 310	Leu	Asn	Lys	Leu	Glu	Asp 315	Pro	Thr	Ala	Lys	Tyr
Ile	Ile	Asp	Pro	Leu 325	Lys	Lys	Gln	Leu	Glu 330	Ala	Leu	Glu	Tyr	Ile 335	Gly
Leu	Ser	Tyr	Leu 340	Thr	Leu	Asn	Arg	Val 345	Thr	Thr	Thr	Leu	Ser	Gly	Gly
Glu	Ala 355	Gln	Arg	Leu	Lys	Leu	Ile 360	Arg	His	Leu	Asn 365	Ser	Ser	Leu	Ser
Asp	Leu 370	Val	Tyr	Ile	Ile	Asp 375	Glu	Pro	Ser	Val	Gly 380	Leu	His	Pro	Glu
Asp 385	Ile	Ala	Lys	Ile 390	Asn	Glu	Ile	Leu	Lys	Ser 395	Leu	Lys	Glu	Lys	Gly
Asn	Thr	Val	Leu	Ile 405	Val	Glu	His	Asp	Pro 410	Asp	Val	Ile	Lys	Glu	Gly
Asp	Tyr	Ile	Ile 420	Asp	Met	Gly	Pro	Gly 425	Ser	Gly	Lys	Asn	Gly	Gly	Glu
Ile	Thr	Phe 435	Glu	Gly	Thr	Tyr	Asn 440	Glu	Leu	Leu	Ser	Ser 445	Asn	Thr	Ser

[illegible]

```

Thr Gly Asn Ala Leu Arg Asn Lys His Asn Leu Lys Glu Asn Ile Arg
  450                      455                      460
Glu Ala Asn His Phe Tyr Asn Ile Gly Pro Val Thr Gln Asn Asn Leu
465                      470                      475                      480
Asn Asn Val Lys Thr Ser Ile Pro Lys His Val Leu Thr Val Leu Thr
                      485                      490                      495
Gly Val Ala Gly Ser Gly Lys Ser Thr Leu Val Lys Ala Gly Phe Glu
                      500                      505                      510
Asn Asn Asp His Thr Ile Phe Ile Asp Gln Lys Ala Val Gln Gly Ser
                      515                      520                      525
Asn Arg Ser Asn Leu Leu Thr Tyr Leu Gly Val Phe Asp Ser Val Arg
                      530                      535                      540
Ser Tyr Phe Ser Lys Glu Thr Gly Leu Asn Lys Ala Met Phe Ser Tyr
545                      550                      555                      560
Asn Ser Lys Gly Ala Cys Pro Asn Cys Gly Gly Lys Gly Tyr Ile Lys
                      565                      570                      575
Thr Glu Leu Ala Phe Met Gly Asp Phe Ser Gln Thr Cys Glu Val Cys
                      580                      585                      590
His Gly Lys Arg Tyr Lys Gln Glu Val Leu Asp Ala Thr Ile Asp Gly
                      595                      600                      605
Tyr Ser Ile Ala Asp Val Leu Asn Leu Thr Val Asp Glu Gly Ile Ile
610                      615                      620
Phe Phe Asp Lys Lys Asn Asp Ile Lys Ser Lys Leu Gln Ser Val Ser
625                      630                      635                      640
Lys Thr Gly Leu Asn Tyr Met Ser Leu Gly Gln Pro Leu Ser Thr Leu
                      645                      650                      655
Ser Gly Gly Glu Ile Gln Arg Val Lys Leu Gly Gln His Leu Asp Glu
                      660                      665                      670
Glu Ile Lys Asn Ser Ile Phe Ile Phe Asp Glu Pro Thr Thr Gly Leu
675                      680                      685
His Glu Ser Asp Ile Pro Ile Leu Met Glu Cys Phe Asp Asp Leu Ile
690                      695                      700
Asp Gln Asn Asn Thr Val Ile Leu Ile Glu His Asn Leu Ser Ile Met
705                      710                      715                      720
Cys Glu Ala Asp Trp Ile Ile Asp Val Gly Pro Gly Pro Gly Leu Asp
                      725                      730                      735
Gly Gly Lys Val Gln Phe Ser Gly Thr Pro Lys Asn Phe Ile Asp Ser
740                      745                      750
Ser Glu Thr Leu Thr Ser Lys His Leu Lys Arg Tyr Ile Lys Gln
755                      760                      765

```

<210> 5830

<211> 82

<212> PRT

<213> S.epidermidis

<400> 5830

```

Phe Phe Pro Ile Ile Leu Thr Ser Met Arg Arg Pro Thr Ser Leu Gly
1                      5                      10                      15
Ile Gly Asn Ile Phe Leu Asn Ile Thr Gly Thr Lys Thr His Val Ile
                      20                      25                      30
Thr Ala Leu Arg Ile Lys Met Pro Glu Val Ser Gly Glu Ile Ala Phe
                      35                      40                      45
Asn Phe Ser Ala Ile Leu Ala Ala Ala Ile Thr Ser Asp Lys Val Asp
50                      55                      60
Val Ser Lys Lys Ala Asp Ala Met Val Val Leu Val Ser Asn Gln Arg

```



```

      195              200              205
Ile Glu Thr Lys Ser Pro Asp Val Tyr Pro Gly Met Glu Lys Gln Leu
  210              215              220
Leu Asp Thr Leu Asp Lys His Asp Leu Leu Thr Gln Lys Ser Leu Lys
 225              230              235              240
His Gly His Val Met Ile Gln Ser Phe Ser Gly Ser Ser Leu Glu Lys
              245              250              255
Val His His Met Asn Ala Asn Ile Pro Leu Ile Arg Leu Met Asn Lys
              260              265              270
Phe Glu Leu Lys Lys Ala Thr Asn Gln Asp Leu Lys Asn Ile Lys Ser
              275              280              285
Tyr Ala Ile Gly Val Gly Pro Glu Tyr Thr Asp Leu Asn Ile Lys Asn
              290              295              300
Thr Arg His Leu Lys Asn Leu Gly Phe Leu Val His Pro Tyr Thr Val
 305              310              315              320
Asp Asp Glu Asn Gln Met Arg Asn Leu Asn Gln Tyr Gly Val Asp Gly
              325              330              335
Val Phe Thr Asn Phe Ala Asp Arg Tyr Lys Lys Val Ser Glu Thr Gln
              340              345              350
Gln

```

```

<210> 5833
<211> 49
<212> PRT
<213> S.epidermidis

```

```

<400> 5833
Ala Thr Lys Ile Lys Asn Thr Ile His Gln Leu Ser Lys Tyr Ile Asn
 1              5              10              15
Asn Glu Leu Glu His Ile Ala Thr Ile Lys Met Leu Ala His Phe Gly
              20              25              30
Lys Leu Tyr Phe Ile Asn Ser Phe Cys Lys Thr Val Leu Ile Tyr Asn
              35              40              45
Ser

```

```

<210> 5834
<211> 173
<212> PRT
<213> S.epidermidis

```

```

<400> 5834
Pro Lys Lys Ile Ser Lys Ala Leu Pro Val Ile Ile Thr Ala Gly Leu
 1              5              10              15
Cys Asp Thr Phe Leu Ile Val Ile Ala Ile Leu Gly Val Ser Leu Ile
              20              25              30
Leu Ile Ser Met Pro Thr Leu Gln Leu Phe Ile Tyr Ile Ile Gly Phe
              35              40              45
Leu Phe Leu Met Tyr Met Ala Trp Ser Leu Trp Thr Glu Lys Pro Ser
              50              55              60
Asn Ile Glu Glu Ile Glu Pro Met Ser Ala Lys Lys Gln Ile Leu Phe
 65              70              75              80
Ala Leu Ser Val Ser Leu Leu Asn Pro His Ala Ile Met Asp Thr Val
              85              90              95
Gly Val Ile Gly Thr Ser Ala Ser Val Tyr Asp Gly Tyr Asp Lys Val

```

```

          100                      105                      110
Val Phe Ser Leu Ala Thr Ile Ser Val Ser Trp Ile Trp Phe Val Phe
          115                      120                      125
Leu Ala Ile Leu Gly Arg Ile Thr Gly Lys Ile Asp Lys Ser Gly Lys
          130                      135                      140
Tyr Ile Val Ile Leu Asn Lys Val Ser Ser Val Ile Val Ile Ile Val
          145                      150                      155                      160
Gly Leu Ile Ile Leu Lys Asn Ile Val Gly Ile Leu Ser
          165                      170

```

<210> 5835
 <211> 40
 <212> PRT
 <213> S.epidermidis

```

<400> 5835
Phe Glu Arg Ile Met Arg Leu Phe Lys Gln Phe Lys Tyr Tyr Ile Leu
1          5          10          15
Val Phe Leu Tyr Arg Glu Val Leu Ala Asn Glu Ile Ile Ile Lys Phe
          20          25          30
Lys Phe Lys Ile Phe Lys Ser Pro
          35          40

```

<210> 5836
 <211> 484
 <212> PRT
 <213> S.epidermidis

```

<400> 5836
Val Ser Leu Ile Phe Met Val Tyr Leu His Lys Leu Met His Tyr Phe
1          5          10          15
Thr Gly Gly Ile Val Met Ser Asn Lys Ala Trp Gly Gly Arg Phe Glu
          20          25          30
Thr Gln Pro Glu Glu Trp Val Asp Asp Phe Asn Ala Ser Ile Asp Phe
          35          40          45
Asp Lys Asn Leu Ile Lys Gln Asp Val Gln Gly Ser Ile Ala His Ala
          50          55          60
Thr Met Leu Ala Lys Gln His Ile Ile Thr Asp Asp Glu Ala Gln Ser
          65          70          75          80
Ile Ile Asn Glu Leu Lys Asn Ile Gln Ser Asp Phe Glu Glu Gly Lys
          85          90          95
Leu Lys Phe Lys Ala Ser Leu Glu Asp Ile His Leu Asn Ile Glu His
          100          105          110
Glu Leu Ile Gln Arg Ile Gly Glu Ala Gly Gly Lys Leu His Thr Gly
          115          120          125
Arg Thr Arg Asn Asp Gln Val Ala Thr Asp Met His Leu Tyr Thr Lys
          130          135          140
Glu Gln Val Gln Tyr Ile Ile Glu Leu Ile Ala Ser Phe Gln Glu Thr
          145          150          155          160
Ile Val Gln Leu Ala Asp Gln His Val Asp Thr Ile Met Pro Gly Tyr
          165          170          175
Thr His Leu Gln Arg Ala Gln Pro Ile Ser Phe Ala His His Ile Met
          180          185          190
Thr Tyr Phe Trp Met Leu Glu Arg Asp Lys Gly Arg Phe Met Asp Ser
          195          200          205
Leu Lys Arg Ile Asp Ile Ser Pro Leu Gly Ala Ala Ala Leu Ser Gly

```

```

      210              215              220
Thr Thr His Pro Ile Asp Arg His Leu Thr Gln Glu Leu Leu Gly Phe
225              230              235              240
Ala Asn Leu Tyr Glu Asn Ser Leu Asp Ala Val Ser Asp Arg Asp Tyr
      245              250              255
Ile Val Glu Thr Leu His His Ile Ser Leu Thr Met Val His Leu Ser
      260              265              270
Arg Phe Ala Glu Glu Ile Ile Phe Trp Ser Thr Asp Glu Ala Lys Phe
      275              280              285
Ile Thr Leu Ser Asp Ala Phe Ser Thr Gly Ser Ser Ile Met Pro Gln
      290              295              300
Lys Lys Asn Pro Asp Met Ala Glu Leu Ile Arg Gly Lys Val Gly Arg
305              310              315              320
Thr Thr Gly His Leu Met Ser Met Leu Val Thr Leu Lys Gly Leu Pro
      325              330              335
Leu Ala Tyr Asn Lys Asp Met Gln Glu Asp Lys Glu Gly Leu Phe Asp
      340              345              350
Ala Val His Thr Leu Lys Gly Ser Leu Arg Ile Phe Glu Gly Met Val
      355              360              365
Ala Ser Met Lys Val Asn Ser Asn Arg Leu Ser Gln Thr Val Lys Asn
      370              375              380
Asp Phe Ser Asn Ala Thr Glu Leu Ala Asp Tyr Leu Val Ser Lys Ser
385              390              395              400
Val Pro Phe Arg Thr Ala His Glu Ile Val Gly Lys Ile Val Leu Asn
      405              410              415
Cys Ile His Lys Gly Ile Tyr Leu Leu Asp Val Pro Leu Ser Glu Tyr
      420              425              430
Gln Glu His His Glu Asn Ile Glu Glu Asp Ile Tyr Asp Tyr Leu Thr
      435              440              445
Pro Glu Asn Cys Leu Lys Arg Arg Gln Ser Tyr Gly Ser Thr Gly Gln
      450              455              460
Glu Ser Val Lys His Gln Leu Lys Val Ala Lys Ala Leu Leu Lys Asp
465              470              475              480
Asn Glu Ser Lys

```

<210> 5837

<211> 559

<212> PRT

<213> S.epidermidis

<400> 5837

```

Ile Ile Met Met Asn His Ser Glu Ala Leu Thr Glu Gln Val Phe Ser
1              5              10              15
Phe Ala Ser Glu Leu Tyr Ala Tyr Gly Val Arg Glu Val Val Ile Ser
      20              25              30
Pro Gly Ser Arg Ser Thr Pro Leu Ala Leu Val Phe Glu Ala His Pro
      35              40              45
Asn Ile Lys Thr Trp Ile His Pro Asp Glu Arg Ser Ala Ala Phe Phe
      50              55              60
Ala Leu Gly Leu Ile Lys Gly Ser Glu Lys Pro Val Ala Ile Leu Cys
65              70              75              80
Thr Ser Gly Thr Ala Ala Ala Asn Tyr Thr Pro Ala Ile Ala Glu Ser
      85              90              95
Gln Ile Ser Arg Leu Pro Leu Val Val Leu Thr Ser Asp Arg Pro His
      100              105              110

```


Glu	Leu	Arg	Ser	Val	Gly	Ala	Pro	Gln	Ala	Ile	Asn	Gln	Val	Asn	Met
		115					120					125			
Phe	Ser	Asn	Tyr	Val	Asn	Phe	Gln	Phe	Asp	Leu	Pro	Ile	Ala	Asp	Gly
		130					135					140			
Ser	Glu	His	Thr	Ile	Asp	Thr	Ile	Asn	Tyr	Gln	Met	Gln	Ile	Ala	Ser
145					150					155					160
Gln	Tyr	Leu	Tyr	Gly	Pro	His	Arg	Gly	Pro	Ile	His	Phe	Asn	Leu	Pro
				165					170					175	
Phe	Arg	Glu	Pro	Leu	Thr	Pro	Asp	Leu	Asp	Arg	Val	Asp	Leu	Leu	Thr
			180					185					190		
Ser	Val	Thr	Lys	Thr	Leu	Pro	His	Tyr	Gln	Lys	Ser	Ile	Ser	Val	Asp
		195					200					205			
Asp	Ile	Lys	Asp	Ile	Leu	Gln	Glu	Lys	Asn	Gly	Leu	Ile	Ile	Val	Gly
	210					215					220				
Asp	Met	Gln	His	Gln	Ala	Val	Asp	Gln	Ile	Leu	Thr	Tyr	Ser	Thr	Ile
225					230					235					240
Tyr	Asp	Leu	Pro	Ile	Leu	Ala	Asp	Pro	Leu	Ser	Gln	Leu	Arg	Lys	Glu
			245						250					255	
Lys	His	Pro	Asn	Val	Ile	Thr	Thr	Tyr	Asp	Leu	Leu	Tyr	Arg	Ala	Gly
			260					265					270		
Leu	Asn	Leu	Glu	Val	Asp	Tyr	Val	Ile	Arg	Val	Gly	Lys	Pro	Val	Ile
		275					280					285			
Ser	Lys	Lys	Leu	Asn	Gln	Trp	Leu	Lys	Lys	Thr	Asp	Ala	Tyr	Gln	Ile
	290					295					300				
Ile	Val	Gln	Asn	Asn	Asp	Gln	Ile	Asp	Val	Phe	Pro	Thr	Pro	Pro	His
305					310					315					320
Ile	Ser	Tyr	Glu	Ile	Ser	Ala	Asn	Asp	Phe	Phe	Arg	Ser	Leu	Met	Glu
			325						330					335	
Glu	Pro	Leu	Val	Glu	Arg	Lys	Lys	Trp	Leu	Gln	Gln	Trp	Gln	Ser	Leu
			340					345					350		
Glu	Gln	Gln	Ala	Arg	Ile	Glu	Ile	Ser	Asp	Tyr	Leu	Lys	His	Ala	Thr
		355					360					365			
Asp	Glu	Ala	Ala	Tyr	Val	Gly	Ser	Leu	Ile	Gln	Lys	Leu	Thr	Lys	Glu
	370					375					380				
Asp	Thr	Leu	Phe	Val	Gly	Asn	Ser	Met	Pro	Ile	Arg	Asp	Val	Asp	Asn
385					390					395					400
Leu	Leu	Phe	Asp	Ser	Glu	Ala	Ser	Val	Tyr	Ala	Asn	Arg	Gly	Ala	Asn
			405						410					415	
Gly	Ile	Asp	Gly	Val	Val	Ser	Thr	Ala	Leu	Gly	Met	Ala	Ala	His	Lys
		420						425					430		
Asn	Val	Thr	Leu	Leu	Ile	Gly	Asp	Leu	Ser	Phe	Tyr	His	Asp	Met	Asn
		435					440					445			
Gly	Leu	Leu	Met	Ala	Lys	Leu	Asn	Glu	Leu	His	Ile	Asn	Ile	Val	Leu
	450					455					460				
Val	Asn	Asn	Asn	Gly	Gly	Gly	Ile	Phe	Ser	Tyr	Leu	Pro	Gln	Lys	Arg
465					470					475					480
Ser	Ala	Thr	Lys	Tyr	Phe	Glu	Arg	Leu	Phe	Gly	Thr	Pro	Thr	Gly	Leu
			485						490					495	
Asn	Phe	Glu	Tyr	Thr	Ala	Leu	Leu	Tyr	Asp	Phe	Thr	Phe	Lys	Arg	Phe
			500					505					510		
Asp	Asn	Leu	Thr	Asp	Phe	Lys	Tyr	Ala	Glu	Leu	Ser	Lys	Met	Gly	Ser
		515					520					525			
His	Met	Tyr	Glu	Val	Ile	Thr	Asn	Arg	Asp	Glu	Asn	Leu	His	Gln	His
	530					535					540				
Gln	Asn	Leu	Tyr	Gln	Lys	Leu	Ser	Glu	Ile	Val	Asn	Val	Thr	Leu	
545					550					555					

<210> 5838
 <211> 148
 <212> PRT
 <213> S.epidermidis

<400> 5838

Gln	Leu	Ser	Ile	Arg	Gln	Ile	Thr	Phe	Lys	Cys	Lys	Asn	Ser	Cys	Tyr
1				5					10					15	
Ile	Arg	Tyr	Ile	Leu	Met	Glu	His	Gly	Asp	Ile	Met	Ser	Lys	Thr	Pro
			20					25					30		
Tyr	Glu	Leu	Ile	Gly	Gln	Lys	Ala	Leu	Tyr	Gln	Met	Ile	Asp	His	Phe
		35					40					45			
Tyr	Gln	Leu	Val	Glu	Lys	Asp	Ser	Arg	Ile	Asn	His	Leu	Phe	Pro	Gly
	50					55					60				
Asp	Phe	Lys	Glu	Thr	Ser	Arg	Lys	Gln	Lys	Gln	Phe	Leu	Thr	Gln	Phe
65					70					75					80
Leu	Gly	Gly	Pro	Asp	Leu	Tyr	Thr	Gln	Glu	His	Gly	His	Pro	Met	Leu
				85					90					95	
Lys	Arg	Arg	His	Met	Glu	Phe	Thr	Ile	Ser	Glu	Tyr	Glu	Arg	Asp	Ala
			100					105					110		
Trp	Leu	Glu	Asn	Met	His	Thr	Ala	Ile	Gln	His	Ala	Gln	Leu	Pro	Ala
		115					120					125			
Gly	Val	Gly	Asp	Tyr	Leu	Phe	Glu	Arg	Leu	Arg	Leu	Thr	Ala	Asn	His
	130					135					140				
Met	Val	Asn	Ser												
145															

<210> 5839
 <211> 612
 <212> PRT
 <213> S.epidermidis

<400> 5839

Ala	Ile	Gln	Ile	Ile	Lys	Glu	Val	Tyr	Ile	Met	Ser	Gln	Gln	Leu	Thr
1				5					10					15	
Arg	Glu	Glu	Gln	Glu	Arg	Lys	Tyr	Pro	Glu	Tyr	Thr	Trp	Asp	Leu	Thr
			20					25					30		
Thr	Ile	Phe	Lys	Ser	Asp	Glu	Ala	Phe	Glu	Glu	Ala	Phe	Lys	Ser	Ile
		35					40					45			
Glu	Ala	Lys	Ile	Gly	Glu	Glu	Glu	Lys	Phe	Lys	Gly	His	Leu	Gly	Glu
	50					55					60				
Ser	Ala	Glu	Thr	Leu	Tyr	Glu	Ala	Leu	Ser	Leu	Glu	Asp	Glu	Leu	Gly
65					70					75					80
Thr	Lys	Leu	Glu	Lys	Val	Tyr	Val	Tyr	Ala	His	Leu	Lys	Gln	Asp	Gln
				85					90					95	
Asp	Thr	Ala	Asn	Asp	Lys	Tyr	Thr	Gly	Leu	Glu	Ala	Arg	Ala	His	Gln
			100					105					110		
Leu	Val	Ile	Lys	Tyr	Ser	Ser	Ala	Trp	Ser	Phe	Leu	Val	Pro	Glu	Ile
		115					120					125			
Leu	Gln	Leu	Asp	Glu	Ala	Thr	Ile	Gln	Ser	Phe	Ile	Asp	Ser	Asn	Asn
	130					135					140				
Asp	Leu	Lys	Arg	Tyr	Glu	Phe	Asp	Leu	Lys	Leu	Ile	Asn	Glu	Lys	Arg
145					150					155					160
Pro	His	Ile	Leu	Asp	Ala	Asn	Thr	Glu	Lys	Leu	Leu	Thr	Glu	Ala	Gln
				165					170					175	

Asp	Ala	Leu	Ser	Thr	Pro	Ser	Asn	Val	Tyr	Gly	Met	Phe	Ser	Asn	Ala		
			180					185					190				
Asp	Leu	Glu	Phe	Glu	Asp	Ala	Ile	Asp	Lys	Asp	Gly	Gln	Ala	Tyr	Pro		
		195					200					205					
Leu	Thr	Gln	Gly	Thr	Phe	Ile	Lys	Tyr	Leu	Glu	Ser	Asp	Asp	Arg	Glu		
	210					215					220						
Leu	Arg	Ala	Ser	Ala	Phe	Arg	Asn	Val	Tyr	Lys	Ala	Tyr	Gly	Ala	His		
225					230					235					240		
Asn	Asn	Thr	Leu	Gly	Ala	Thr	Leu	Ala	Gly	Glu	Val	Lys	Lys	Asn	Val		
			245						250					255			
Phe	Asn	Ala	Arg	Thr	His	His	Tyr	Arg	Ser	Ala	Arg	Glu	Arg	Ala	Leu		
		260						265					270				
Ser	Asn	Asn	His	Ile	Pro	Glu	Ala	Val	Tyr	Asp	Asn	Leu	Ile	Lys	Thr		
		275					280					285					
Val	His	Lys	Tyr	Leu	Pro	Leu	Leu	His	Arg	Tyr	Thr	Lys	Leu	Arg	Gln		
	290					295					300						
Glu	Leu	Leu	Gly	Leu	Asp	Asp	Leu	Lys	Met	Tyr	Asp	Leu	Tyr	Thr	Pro		
305					310					315					320		
Leu	Val	Lys	Asp	Val	Lys	Phe	Glu	Met	Pro	Tyr	Glu	Glu	Ala	Lys	Ser		
			325					330						335			
Trp	Met	Leu	Lys	Ala	Leu	Glu	Pro	Met	Gly	Glu	Glu	Tyr	Leu	Asn	Val		
		340					345						350				
Val	Lys	Lys	Gly	Leu	Asp	Asn	Arg	Trp	Val	Asp	Val	Tyr	Glu	Asn	Lys		
	355					360						365					
Gly	Lys	Arg	Ser	Gly	Gly	Tyr	Ser	Ser	Gly	Gly	His	Leu	Thr	Asn	Pro		
	370					375					380						
Phe	Ile	Leu	Leu	Asn	Trp	Ser	Asp	Thr	Val	Ser	Asp	Leu	Tyr	Thr	Leu		
385					390					395					400		
Val	His	Glu	Phe	Gly	His	Ser	Ala	His	Ser	Tyr	Phe	Ser	Arg	Gln	Asn		
			405						410					415			
Gln	Pro	Ser	Asn	Leu	Ser	Asp	Tyr	Thr	Ile	Phe	Val	Ala	Glu	Val	Ala		
			420					425					430				
Ser	Thr	Cys	Asn	Glu	Ala	Leu	Leu	Ser	Asp	Tyr	Met	Asp	Lys	His	Leu		
		435					440					445					
Asp	Asp	Glu	Arg	Arg	Leu	Leu	Leu	Leu	Asn	Gln	Glu	Leu	Glu	Arg	Phe		
	450					455					460						
Arg	Ala	Thr	Leu	Phe	Arg	Gln	Thr	Met	Phe	Ala	Glu	Phe	Glu	His	Lys		
465					470					475					480		
Ile	His	Gln	Ile	Glu	Glu	Ala	Gly	Glu	Pro	Leu	Thr	Pro	Asn	Arg	Met		
			485						490					495			
Asn	Glu	Glu	Tyr	Ala	Lys	Leu	Asn	Lys	Leu	Tyr	Phe	Gly	Glu	Ala	Val		
		500						505					510				
Glu	Thr	Asp	Asp	Asp	Ile	Ser	Lys	Glu	Trp	Ser	Arg	Ile	Pro	His	Phe		
	515						520					525					
Tyr	Met	Asn	Tyr	Tyr	Val	Tyr	Gln	Tyr	Ala	Thr	Gly	Tyr	Ser	Ala	Ala		
	530					535					540						
Gln	Ser	Leu	Ser	His	Gln	Ile	Leu	Thr	Glu	Gly	Gln	Pro	Ala	Val	Glu		
545					550					555					560		
Arg	Tyr	Ile	Asn	Glu	Phe	Leu	Lys	Lys	Gly	Ser	Ser	Asn	Tyr	Pro	Ile		
			565						570					575			
Glu	Ile	Leu	Lys	Asn	Ala	Gly	Val	Asp	Met	Thr	Thr	Pro	Gln	Pro	Ile		
		580						585					590				
Glu	Glu	Ala	Cys	Glu	Val	Phe	Glu	Gln	Lys	Leu	Asp	Ala	Phe	Glu	Lys		
		595					600					605					
Leu	Met	Lys	Ala														
	610																

<210> 5840
 <211> 49
 <212> PRT
 <213> S.epidermidis

<400> 5840
 Arg Tyr Asn Leu Ser Met Ile Glu Ser Leu Cys His Tyr Lys Cys Lys
 1 5 10 15
 Gly Leu His Ile Cys Phe Ala Ser Arg Phe Ser Leu Phe His Thr Ile
 20 25 30
 Gln Phe Phe Asp Tyr Asp Asp Ile Asp Ser Phe Tyr Cys Tyr Ile Lys
 35 40 45
 Lys

<210> 5841
 <211> 43
 <212> PRT
 <213> S.epidermidis

<400> 5841
 Thr Ser Asn Phe Phe Thr Asn Gln Phe His Lys Thr Asn Ala Ile Ala
 1 5 10 15
 Ser Asn Gln Leu Ile Gln Thr Asn Phe Ile Ser Phe Lys Leu Thr Arg
 20 25 30
 Ser Phe Ser Tyr Val Ile Ala Ile Pro Ile Ile
 35 40

<210> 5842
 <211> 332
 <212> PRT
 <213> S.epidermidis

<400> 5842
 Gly Glu Asn Val Met Lys Phe Ile Ser Asn Asn Asn Ile Asn Asp Pro
 1 5 10 15
 Ser Leu Asn Leu Ala Met Glu Glu Tyr Val Leu Lys Asn Leu Pro Ser
 20 25 30
 Glu Glu Ser Tyr Phe Leu Phe Tyr Ile Asn Arg Pro Ser Ile Ile Val
 35 40 45
 Gly Lys Asn Gln Asn Thr Ile Glu Glu Val Asn Gln Ala Tyr Ile Asp
 50 55 60
 Lys His Gln Ile Asp Val Val Arg Arg Ile Ser Gly Gly Gly Ala Val
 65 70 75 80
 Tyr His Asp Thr Gly Asn Leu Asn Phe Ser Phe Ile Thr Asp Asp Asp
 85 90 95
 Gly His Ser Phe His Asn Phe Lys Lys Phe Thr Met Pro Ile Val Gln
 100 105 110
 Ala Leu Gln Ser Met Gly Val Asn Ala Glu Met Thr Gly Arg Asn Asp
 115 120 125
 Ile Gln Val Gly Gln Ala Lys Ile Ser Gly Asn Ala Met Val Lys Val
 130 135 140
 Lys Asn Arg Met Phe Ser His Gly Thr Leu Met Leu Asn Cys Asp Leu
 145 150 155 160
 Asn Glu Val Gln Lys Ala Leu Lys Val Asn Pro Ala Lys Ile Lys Ser

```
<210> 5843
<211> 168
<212> PRT
<213> S.epidermidis
```

```
<210> 5844
<211> 72
<212> PRT
<213> S.epidermidis
```

<400> 5844

Ile Phe Gly Val Ala Thr Asn His Leu Lys Glu Ser Gly Leu Thr Asn
 1 5 10 15
 Val Lys Gly Leu Met Arg Ile Ile Ile Glu Lys Pro Phe Gly Asp Asp
 20 25 30
 Leu Lys Ser Ala Lys Lys Leu Asn Asn Gln Ile Ser Lys Ser Phe Lys
 35 40 45
 Glu Glu Glu Ile Phe Gly Ile Gly His Tyr Leu Ser Lys Glu Met Ile
 50 55 60
 Gln Asn Ile Glu Arg Leu Arg Phe
 65 70

<210> 5845

<211> 264

<212> PRT

<213> S.epidermidis

<400> 5845

Ile Asn Leu Val Arg Phe Lys Met Lys Ala Phe Val Glu Ala Val Asp
 1 5 10 15
 Glu Leu Gly Gly Ile Tyr Tyr Asp Val Pro Tyr Asn Leu Asn Glu Pro
 20 25 30
 Asn Ser Asp Asp Thr Gly Arg Ile Lys Ile Lys Lys Gly Tyr Gln Lys
 35 40 45
 Leu Asn Gly Asp Gln Ala Leu Ala Val Ala Arg Thr Arg His His Asp
 50 55 60
 Ser Asp Leu Lys Arg Gly Gln Arg Gln Met Glu Leu Ile Lys Ile Leu
 65 70 75 80
 Phe Gln Lys Ala Gln Asn Leu Lys Ser Ile Asp Lys Leu Asp Asn Val
 85 90 95
 Ile Ser Ile Val Gly Lys Asn Ala Lys His Asn Leu Thr Gln Lys Glu
 100 105 110
 Ile Lys Ser Leu Ala Lys Met Tyr Leu Gly Gly Ser Thr Glu Ile Lys
 115 120 125
 Thr Ser Gln Leu Lys Gly Lys Asp Asp Tyr Leu Asn Asp Ile Tyr Tyr
 130 135 140
 Tyr His Pro Ser Val Lys Ser Ile Met Glu Tyr Ser Asn Leu Leu Arg
 145 150 155 160
 Asn Asp Leu Asp Leu Ser Lys Ile Thr Asn Lys Asn Asp Phe Leu Asp
 165 170 175
 Gln Arg Val Ile Lys Arg Tyr Gly Ser Leu Val Pro Leu Thr Glu Leu
 180 185 190
 Asp Glu Asp Leu Leu Arg Lys Asn Gln Lys Glu Ser Thr Asp Ser Gln
 195 200 205
 Lys Glu Ser Asp Ser Ser Ser Gln Asn Asn Asp Glu Glu Asp Gln Thr
 210 215 220
 Asn Glu Gln Thr Asp Gln Asn Ser Leu Asn Gly Asn Glu Gln Tyr Pro
 225 230 235 240
 Asn Gln Gln Asp Asn Asn Gln Thr Asn Gly Glu Asn Gly Met Ile Asn
 245 250 255
 Asn Asp Asn Tyr Pro Tyr Ala Gln
 260

<210> 5846

<211> 77

<212> PRT

<213> S.epidermidis

<400> 5846

Lys Val Val Val Phe Met Asn His Asn Thr Glu Val Lys Tyr Thr Thr
 1 5 10 15
 Leu Glu Asp Phe Val Met Thr Val Asn Asp Leu Gly Val Glu Leu Val
 20 25 30
 Ile Glu Glu Ala Leu Arg Asn Ala Arg Lys Ala Lys Leu Lys Leu Leu
 35 40 45
 Ile Asp Glu Ala Leu Ile Asn Lys Asn Glu Asn Asp Phe Ile Gln Tyr
 50 55 60
 Thr Asn Glu Phe Lys Gln Leu Glu Ala Phe Leu Ser Glu
 65 70 75

<210> 5847

<211> 80

<212> PRT

<213> S.epidermidis

<400> 5847

Tyr Asn Thr Val Lys Tyr Pro Phe Gln Pro Leu Phe Ile His Lys Thr
 1 5 10 15
 Lys Leu Ser Gln Ser Val His Ile Val Ser Glu Phe Asn Ser Thr Lys
 20 25 30
 Leu Ser Leu Thr Phe Gln Lys His Leu Ile Phe Val Arg Ile Leu His
 35 40 45
 Lys Leu Pro Leu Leu Val Glu Val Leu Ser Cys Gln His Leu His Phe
 50 55 60
 Leu Ile Phe Gln Ser Asp Ser Leu Ser Tyr Pro Phe Leu Arg Ile His
 65 70 75 80

<210> 5848

<211> 1076

<212> PRT

<213> S.epidermidis

<400> 5848

Glu Met Lys Val Val Lys Asp Met Ile Pro Thr Lys Pro His Asp Val
 1 5 10 15
 Ile Trp Thr Asp Ala Gln Trp Gln Ser Ile Tyr Ala Lys Gly Gln Asp
 20 25 30
 Ile Leu Val Ala Ala Ala Ala Gly Ser Gly Lys Thr Ala Val Leu Val
 35 40 45
 Glu Arg Ile Ile Gln Arg Ile Leu Arg Asp Glu Val Asp Val Asp Arg
 50 55 60
 Leu Leu Val Val Thr Phe Thr Asn Leu Ser Ala Arg Glu Met Lys His
 65 70 75 80
 Arg Val Asp Lys Arg Ile Gln Glu Ala Ser Phe Lys Asp Pro Asn Asn
 85 90 95
 Glu His Leu Lys Asn Gln Arg Ile Lys Ile His Gln Ala Gln Ile Ser
 100 105 110
 Thr Leu His Ser Phe Cys Leu Lys Leu Ile Gln Gln His Tyr Asp Val
 115 120 125
 Leu Asp Ile Asp Pro His Phe Arg Thr Ser Ser Glu Ala Glu Asn Ile
 130 135 140
 Leu Leu Leu Glu Gln Thr Ile Asp Asp Val Leu Glu Gln His Tyr Asp

145					150								160			
Lys	Leu	Asp	Pro	His	Phe	Ile	Glu	Leu	Thr	Glu	Gln	Leu	Ser	Ser	Asp	
				165					170					175		
Arg	Asn	Asp	Asp	Gln	Phe	Arg	Ser	Ile	Ile	Lys	Gln	Leu	Tyr	Phe	Phe	
			180					185					190			
Ser	Ile	Ala	Asn	Pro	Gln	Pro	Phe	Glu	Trp	Leu	Asn	Gln	Leu	Ala	Gln	
		195					200					205				
Pro	Tyr	Lys	Glu	Glu	Asn	Lys	Gln	Arg	Glu	Leu	Met	Gln	Leu	Ile	Asn	
	210					215					220					
Asp	Leu	Ala	Met	Ile	Phe	Met	Lys	Ala	Gly	Tyr	Glu	Glu	Leu	Gln	Lys	
225				230						235					240	
Ser	Tyr	Asp	Leu	Phe	Ser	Met	Met	Glu	Ser	Val	Asp	Lys	Gln	Leu	Glu	
				245					250					255		
Val	Ile	Glu	Thr	Glu	Arg	Met	Phe	Ile	Thr	Lys	Ala	Ile	Glu	Gly	Lys	
			260					265					270			
Val	Leu	Asn	Thr	Asp	Val	Ile	Thr	Gln	His	Glu	Phe	Met	Ser	Arg	Phe	
		275					280					285				
Pro	Ala	Ile	Asn	Ser	Lys	Ile	Lys	Glu	Ala	Asn	Glu	Gly	Met	Glu	Asp	
	290					295					300					
Ala	Leu	Asn	Glu	Ala	Lys	Gln	His	Tyr	Asp	Lys	Tyr	Lys	Ser	Leu	Val	
305					310					315					320	
Met	Lys	Val	Lys	Asn	Asp	Tyr	Phe	Ser	Arg	Asn	Ala	Glu	Asp	Leu	Gln	
				325					330					335		
Arg	Asp	Met	Gln	Gln	Leu	Ala	His	Arg	Val	Ala	Tyr	Leu	Ala	Gln	Ile	
			340					345					350			
Val	Gln	Asp	Val	Ile	Gln	Ser	Phe	Gly	Val	Gln	Lys	Arg	Ser	Arg	Asn	
		355					360					365				
Ile	Leu	Asp	Phe	Ser	Asp	Tyr	Glu	His	Phe	Ala	Leu	Arg	Ile	Leu	Thr	
	370					375					380					
Asn	Glu	Asp	Gly	Ser	Pro	Ser	Arg	Ile	Ala	Glu	Thr	Tyr	Arg	Glu	His	
385					390					395					400	
Phe	Lys	Glu	Ile	Leu	Val	Asp	Glu	Tyr	Gln	Asp	Thr	Asn	Arg	Val	Gln	
				405					410					415		
Glu	Lys	Ile	Leu	Ser	Cys	Ile	Lys	Thr	Gly	Glu	Glu	His	Asp	Gly	Asn	
			420					425					430			
Leu	Phe	Met	Val	Gly	Asp	Val	Lys	Gln	Ser	Ile	Tyr	Lys	Phe	Arg	Gln	
		435					440					445				
Ala	Asp	Pro	Ser	Leu	Phe	Ile	Glu	Lys	Tyr	Asn	Arg	Phe	Ser	Ser	Ser	
		450				455					460					
Gly	Thr	Glu	Ser	Gly	Leu	Arg	Ile	Asp	Leu	Ser	Gln	Asn	Phe	Arg	Ser	
465					470					475					480	
Arg	Gln	Glu	Val	Leu	Ser	Thr	Thr	Asn	Tyr	Leu	Phe	Lys	His	Met	Met	
				485					490					495		
Asp	Glu	Gln	Val	Gly	Glu	Ile	Ser	Tyr	Asp	Asp	Ala	Ala	Gln	Leu	Tyr	
			500					505								